FORMAX®

# 7102 Series / 7102XT Series
# High-Capacity Modular Inserter Systems

11/2014

OPERATOR MANUAL

# Table of Contents

# 1 Introduction



## Introduction

With this inserter you have an advanced, medium-volume folding and inserting machine. Its modular construction allows multiple feed units to be fitted, with a maximum of 17 feed units for 7102XT and 9 feed units for 7102. Its sophisticated software control optimises the order and flow of documents for collating at the insert head before insertion into the envelope. All fold and adjustments take place automatically according to the requirements programmed in by the operator.

In order to ensure the long usage of this machine and its components, and above all the safe use of the machine, you must read and adhere to the operating instructions and safety notes. Always be aware of all warnings and notes that are mounted or noted on the machine itself.

All persons entrusted with the handling of this machine must also be familiar with the operating manual.
Save this handbook carefully, so that the information it contains may be available at all times.

### Pictograms

| | |
|---|---|
|  | General Warnings |
|  | Warning of danger from electricity or electrical shock |
|  | Information / Note indicating important information regarding the handling of the machine. |

# Notes on the use of this handbook

This document contains all general information and explanatory text necessary in order to be able to carry out the operation of the machine.
When some action is expected from the operator, this will always be explicitly stated, and where relevant, accompanied by an illustration or graphic.
Always read through each step, so that you will obtain all of the necessary information. Do not anticipate what you believe will follow in the handbook: It will prevent you from making mistakes!

**Chronology and Reference**

This handbook is structured chronologically, and therefore ordered sequentially for the operationally ready machine. It assumes that the machine has been installed in the correct environment by an Authorised Service Engineer and that the operator or his or her supervisor has had a degree of operator training.

When you are unfamiliar with the machine, it is best to read through the handbook from beginning to end. You will be guided step by step, and in this way you can easily and quickly have the machine in operation.

If you are already familiar with the machine, it will make things easy if you use this handbook as a reference work.

# 2 Safety notes



## Safety notes

For your own safety and the operating safety of the machine, read the following notes carefully before starting your machine. Always be aware of all warnings and notes that are mounted or noted on the machine itself. Save this handbook carefully, so that the information it contains may be available at all times.

The machine is of advanced construction and reliable in operation. Nevertheless, the device does present hazards when operated by untrained personnel. The same applies to use that is inappropriate and not in keeping with its intended purpose.

**In not adhering to this handbook, there is the danger of**

- An electrical shock.
- Injuries from the intake at the rotating rollers.
- Damage to the machine.

**To stop the machine in an emergency, open any cover.**

## General safety notes

Please, read these notes with care.
Save these instructions for later use.
All notes and warnings found on the machine are to be followed.

**Installing the machine**

**The machine must be installed only by an Authorised Service Engineer.**

A safe, level position is necessary, when installing the machine, with sufficient space all round to operate it. The machine is to be protected from moisture. If moving the machine, ensure that the castor brakes are off, and push on the stand, not the machine.

Ensure there is at least 1 metre of free space between the operator side of the machine and a wall or barrier. To provide access to the mains switch, the opposite side of the machine must be at least 150mm from a wall or barrier. Do not place surrounding furniture or other objects where your path may be obstructed.

**Electrical danger**

The machine may only be connected to a voltage of 230V/50Hz or 115V/60 Hz,depending upon model.
The mains plug may only be connected with a socket having an installed protective contact! The protective effect will be compromised by the use of an extension line without a protective grounding conductor. All interruptions of the protective grounding conductor, within or outside of the machine, are prohibited. The device is double pole fused! When fuse failure occurs, electrical machine parts can still carry voltage. When making the connection to the mains power, be aware of the connection values on the nameplate. Inspect the voltage setting on the device's power input module. Run the supply lines in such a way, that no-one may trip over them. Do not place any objects upon the supply line. When the machine is not in use over a long period of time, it should be disconnected from the power supply. In this way, damage would be prevented in the event of excess voltage. Protect the device from moisture. When moisture enters the machine, there is the danger of electrical shock. Never open the machine except the top cover. For reasons of electrical safety, the machine may only be opened by authorized Service Agents.

**Operating safety**

Never reach into the machine when it is running! This could only occur if a safety interlock were to fail.
The danger of injuries exists, through pulling in and crushing on the rotating rollers. In addition, keep long hair and parts of loose clothing far from the machine in operation. **If a safety interlock fails, your Service Agent must be contacted immediately!**
In order to prevent damage to the machine, only factory authorized accessory parts should be used.

**Cleaning the machine**

Prior to cleaning the exterior of the machine, it should be disconnected from the power supply. When cleaning the machine, do not use liquid or spray cleaners, but only a cloth dampened with water.

**Cleaning sensors**

When cleaning sensors use **only** non-flammable airdusters.
Other types may use flammable propellants, which could result in fire or explosion.

**Allow machine to be checked by the Service Technician**

In the following cases, the mains plug must be unplugged and the device left for the authorized Service Technician:

- When the mains cable or plug is worn or damaged.
- When water or other liquid has entered the device.
- When the device does not function properly, in spite of following the instructions provided.
- When the device has fallen down or the housing is damaged.
- When there are noticeable differences in the normal operation of the machine.

**Spare Parts**

When repair work is carried out, only original spare parts or spare parts corresponding to the original parts may be used.

**Repairs**

Do not disassemble the machine any further than is described in this handbook. Other than the top cover, the opening of the machine by unauthorized personnel is not permitted.
Repairs may only be carried out by an authorized Service Technician.
Modification is not permitted:
For safety reasons, your own reworking and modifications are not permitted.

Please contact your Service Techncian, for all questions relating to service and repair. In this way, you ensure the operational safety of your machine.

## FCC Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the Technical Support department for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

# 3 Description of machine

## Description of operation



The function of the machine is to fold forms to ‘C’, ‘Z’, ‘V’ or double forward fold, either singly, in fixed multiples or in varying groups. Enclosures such as inserts, BR envelopes etc. may be added. Folded forms and enclosures are collated in the collation area in the inserter head before insertion into the envelope. Forms may be inserted without sealing the envelope for subsequent checking or hand insertion.

There is a batch processing facility, allowing a preset number of cycles to be completed before the machine automatically stops.

The machine is OMR/Barcode/2D compatible for use with a reading feeder or tower folder, allowing a group of forms to be collated on the track prior to folding. A number of barcode symbologies may be read.

The machine consists of a number of modules, depending upon the build ordered - these modules are briefly described below:

- **Inserter head** - Collates all documents in a pocket before insertion, feeds the envelope, inserts the pack and seals the flap.
- **Feeder** - Feeds shortform inserts (cards, BR envelopes, booklets etc.) onto the track for subsequent insertion. Available with single or twin feed hoppers. An OMR/Barcode/2D version is also available.
- **Feeder Folder** - Track mounted folder for folding document inserts. Fitted with a 2-plate folder mechanism for C, Z or V folds. Single hopper only.
- **Tower Folder** - Mounts at the end of the machine. Folds documents either separately or in groups, using an accumulator if required. Fitted with either a 1 x 1000, 3 x 500 or 1 x 1000 plus 1 x 500 sheet trays. Uses a 3-plate folding mechanism. An OMR/Barcode version is also available (top or bottom read).

The machine is equipped with PC controlled operating software from where jobs can be programmed and run. The number of jobs that can be programmed is limited only by the capacity of the PC. Input is via touchscreen monitor.

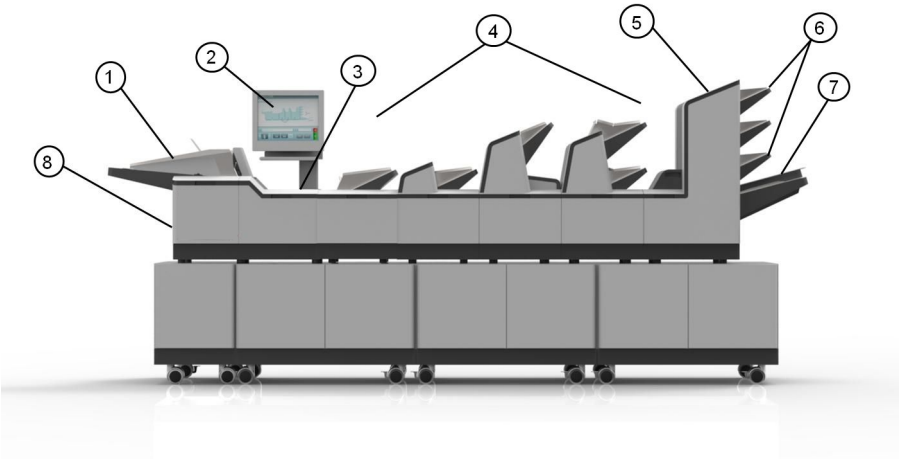
A daily mail function can be used as an optional feature on a flex folder or versatile feeder. This allows groups of documents, stapled or loose, to be hand-fed; they will then be folded and inserted into an envelope (flex folder only). If other hoppers are loaded, further forms can be collated.

No manual setting of the fold plates or envelope closer is required, these being adjusted automatically according to the settings in the selected program.

The envelope output conveyor replace a standard receiving tray, and can be installed in two possible orientations, straight-on or at a 90-degree angle to the system.

## Identification of parts

The main parts of the machine are shown below.



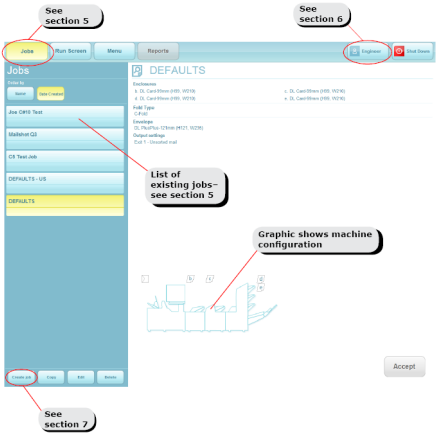
1. **Envelope feeder**
   Holds up to 400 (7102) or 800 envelopes (7102XT). Fitted with a sensing conveyor that operates on demand to move the envelope stack forward.
2. **Touch-sensitive monitor**
   Runs the IMOS operating software and responds to button pushes.
3. **Collation and insertion area**
   Folded forms, either singly or in groups, are collated here into one pack, along with enclosures. The pack in then inserted into the envelope.
4. **Feeders/Folders**
   These are track mounted units, with an end-station variant also available. Up to 17 feed trays for a 7102XT 9 for a 7102 may be fitted.
   The feeder (single or twin) feeds enclosures such as inserts, flyers, BREs etc. The hopper holds up to 1000 20# inserts. A reading variant for OMR/ BCR/2D is also available, as is a feeder folder for long documents.
5. **Tower Folder**
   This is a folder unit and is only available as an end module. It can be fitted to the insertion head on its own, or in conjunction with feeders. It is fitted with various options of feed trays and an accumulator (see following page).
6. **Feed Trays**
   Fitted to the Tower Folder. 3 options available: 3 x 500-Tray, 1 x 500 with 1 x 1000-Trays & 1 x 1000-Tray; all variants can be mark reading as an option.
7. **Accumulator**
   Attached to the Flex Tower and allows groups of forms to be collated together before folding as a group. It is also fitted with a diverter tray.
8. **Closer/Eject Area**
   This is where the envelope flap is closed and sealed before ejected the filled envelope into a receiving tray or onto a conveyor.

**Items 1, 2, 3 & 8 are all part of the Insertion Head Unit.**

# 4 Control Panel

## The Job Screen

This is the screen displayed when the machine starts up.

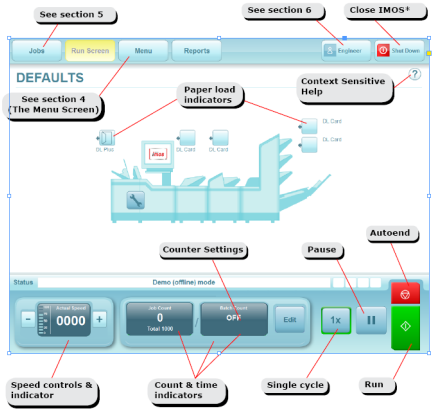



See Running an Existing Job on page 21 for running an existing job directly from this screen.

# The Run Screen

## The Run Screen displayed

This is the screen you will see after an existing job has been selected in the Job Menu.




* This button closes down the IMOS operating software - it does **not** switch the machine off.

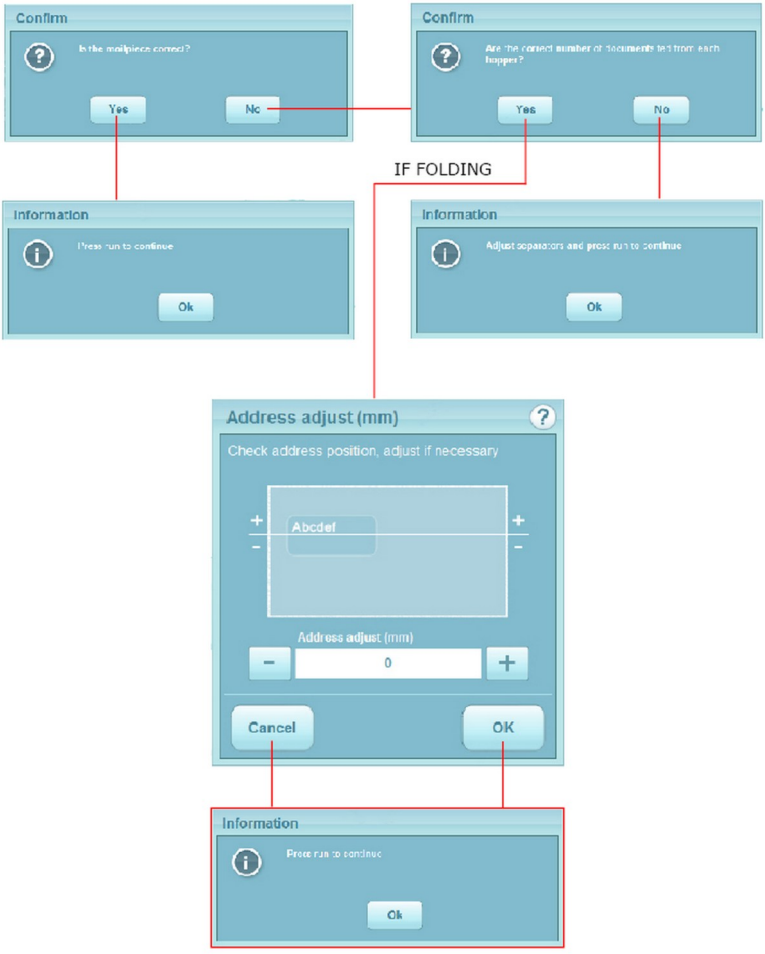
To change the current user or job, click on the buttons and you will be presented with a list of all those that have been created, and allow you to select any one. Note that to change to a different user will require the appropriate password to be entered. To view and adjust the settings for the envelope and document inserters, click on the relevant part of the machine graphic (see the following pages for details).

**Important:** you must be logged in as Supervisor to change the current user or job.

## Address adjustment

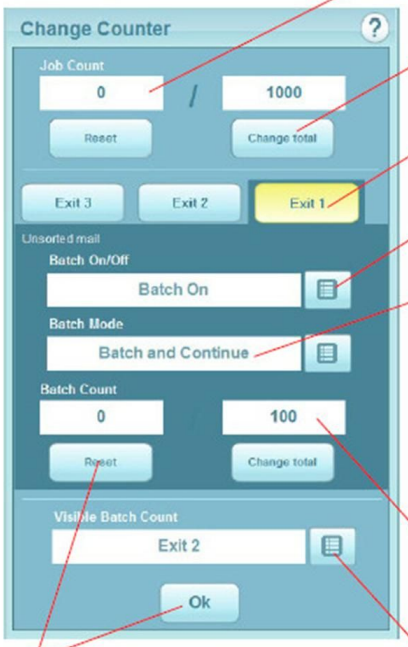
After pressing the **Run** button, the first piece will be processed and the machine will stop to allow you to adjust the vertical alignment of the address, if required.

Remove the filled envelope and adjust as necessary, as shown below:



# Counters Settings

**1.** Press the **Edit** button next to the counters to display the **Change Counter** box as follows:




Applies to current job until it is changed, even if machine is switched off and later resumed. Press **Reset** to return to zero.

Press **Change total** to set the total for the job. When total is reached, machine will continue anyway.

Select the exit that you want batching to apply to (if required).
**Note:** Exits 2 & 3 will only appear if one or more Sorters are fitted.

Switch batch on if using this function.

Set batch mode as follows for when batch quantity is reached:
**Batch and Continue:** Machine will pause for the specified pause time (see 7.1.3) and then resume. **Note:** conveyor will continue to run during the pause time.
**Batch and Stop:** Machine will stop and resume only when the Run button is pressed.

Press **Change total** to set the batch quantity required.
**Note:** This total applies to the Exit selected above.

Select the Exit that you want the Batch Count displayed on the Run Screen to apply to.

Press **Reset** at any time to return to zero.

Press **OK** when all settings are complete.

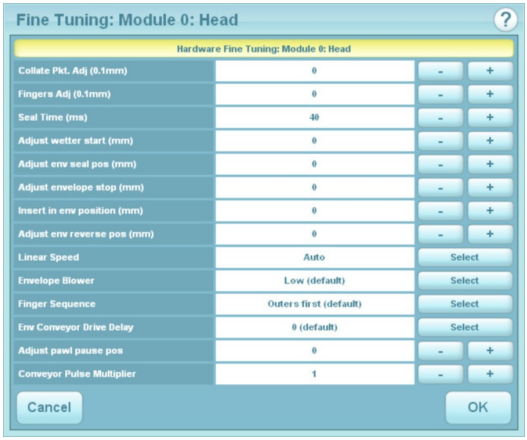
# Adjusting the Envelope Inserter settings

**Unit Fine Tuning**

All fine adjustments apply only to the current job and will not affect any other jobs. Note also that settings available will depend upon user access rights (see User Access Right on page 24).

1. Select the inserter icon on the machine graphic in the Run screen to display the fine tuning screen.

2. Select **Hardware Fine Tuning** to display further information.




**You can change:**

- The width of the collate pocket guides.
- The overall width of the insert fingers.
- The time allowed for the flap to seal before the envelope is ejected.
- Adjustment of the point at which the wetter beam drops to wet the flap. +ve increases wetting in 1mm steps (moves start point towards insertion area).
- Adjustment of the amount of envelope travel into the sealing rollers. +ve = further forward, away from exit direction.
- Adjustment of the envelope stop position for insertion. +ve = further forwards, towards exit direction.
- Adjustment of the amount of insertion of the insert pack into the envelope. +ve = further forwards past the flap crease.
- Adjustment of the amount of envelope forward travel after flap wetting, before reversing to enter the sealing rollers. +ve = further forward into the output rollers, towards the exit direction. **for high-window envelopes, this should be set to 20 - 50mm +ve.**
- Adjustment of inserter head speed. Set a lower speed if insert packs are not being fully inserted, eg. for long packs.
- Control of blower fan which assists envelope opening. Increase to open envelope more, eg. for thick packs, decrease for single sheets or thin packs.
- Changing finger sequence if envelopes are not opening properly. Try other settings if this is the case.
- Adjustment of number of envelopes that will feed before the detection flags switches the conveyor back on after it has stopped. Increase number if envelopes are ‘bunching’.
- Adjustment of degree of pause of the insertion pawls after inserting pack. Increase if pawls start moving too soon and contacting inserted pack before it has moved towards closer.
- Control of the overlap of sealed packs on the output conveyor. Higher number will increase conveyor speed and reduce overlap.
- Collate Slowdown: Select ‘Not on Last Form’ for thick packs if the final document in the pack does not feed fully into the collate pocket.

3. When all adjustments are complete, select the 'Unit' button for hopper settings, as described below.

**Hopper Fine Tuning**

1. From here you can adjust hopper settings. Select the envelope icon on the machine graphic in the Run screen then **Document Fine Tuning** to display further information.


You can change:

- Whether or not the envelope is sealed. Select ‘Off’ if, for example, later hand insertion of an insert or any other item will be required.
- The setting of the amount of envelope deskew required. use higher settings only when necessary – machine operates faster on lower settings.

All fine adjustments apply only to the current job and will not affect any other jobs

# Adjusting the Document Unit settings

### Unit Fine Tuning

The fine tuning options available will depend upon whether a Feeder or Tower Folder is fitted. Note also that settings available will depend upon user access rights (see User Access Rights on page 24).

1. Select the document or insert icon on the machine graphic in the Run screen to display the fine tuning screen.

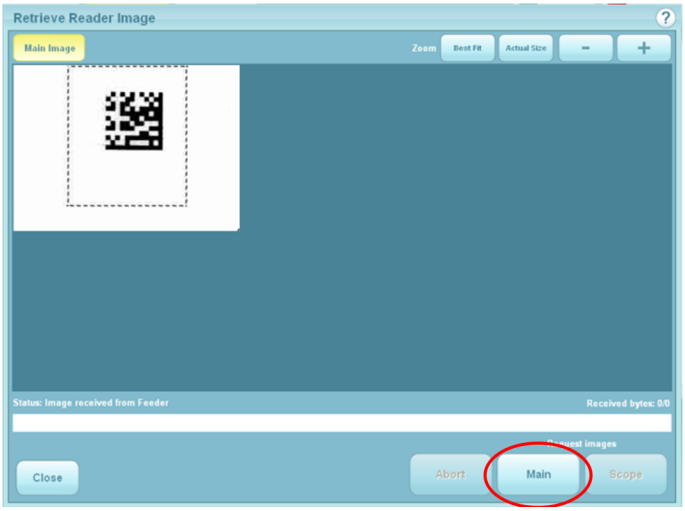
**Hopper Fine Tuning**

**1.** From here you can adjust hopper settings (depends per module due to DFC).


You can select:

- Feed Always or not. If you select **Off**, the unit is disused until it is turned back on again.
- Whether doubles detection is turned on or off. Turn off if booklets or very thick inserts are being fed. If turned on, select whether Optical or Mechanical detection, or Auto (software decides).
- Optical doubles sensitivity (valid only if Optical Doubles On is selected). Low set-ting is more tolerant to high contrast printing.
- Amount of deskew; use higher settings only when necessary – machine operates faster on lower settings.
- **Only for Reading units.** Reset Seq. Count - if Sequence OMR marks are being used and the job is disrupted for any reason, select this button to reset the sequence.
- **Only for Reading units.** Retrieve CIS Image - if selected, images of the label as seen by the CIS reader will be displayed. The images will be of the final 2 documents in the group and can be useful for error checking by confirming that the whole label was read, for example, or comparing the 2 images.

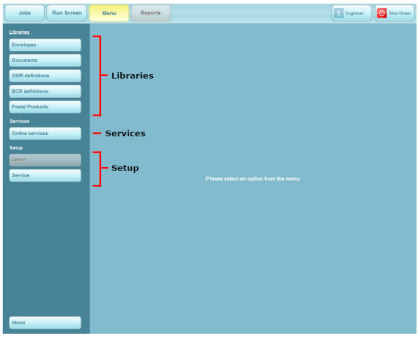
-



All fine adjustments apply only to the current job and will not affect any other jobs

## The Menu Screen

The Menu screen allows various functions to be selected. These functions are described in detail further in this document.



# 5 Running an existing job

## Running an existing job

This section describes running an existing pre-programmed job. To create a new job, see Creating a job on page 26.

If the IMOS operating software is not already running, it must be started using the icon on the monitor screen. To access the PC to switch it on, open the cupboard door below the inserter head.

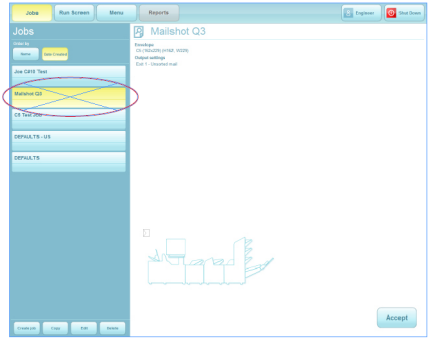
Before running a job, the paper hoppers must be loaded with stationery - see Loading the paper hoppers on page 51 for details.

Paper is normally loaded in the Tower face-up and feet-first if non-reading, but may be either way up if reading, depending upon whether top or bottom reading. **See also appendix A.**

When using the cascade function, the Run button must be pressed while the machine is still running, after you have reloaded the empty hopper. This ensures the paper is fed to its pre-load position.

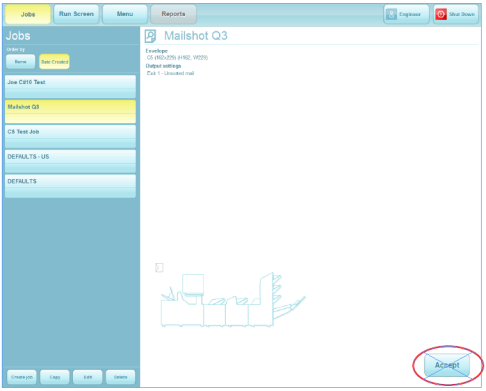
If this is not carried out the machine will stop, even though the hopper is full: if this happens, press the Run button to continue.

1. If the Job screen is not already displayed, press the **Jobs** button at the top and select the required job from the list (use the scroll arrows if needed).




2. Summary of selected job is shown.

3. If you are happy with your selection, press **Accept**, otherwise, select another job.




4. Load the paper and envelopes in the hoppers indicated.

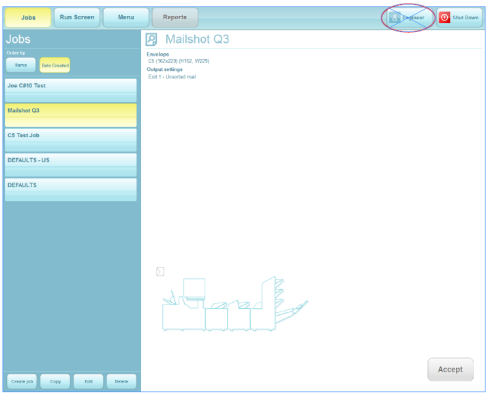

5. Press the Run button to begin operating.
See also The Run Screen on page 11 for a full description of the controls.

# 6 Switching the user

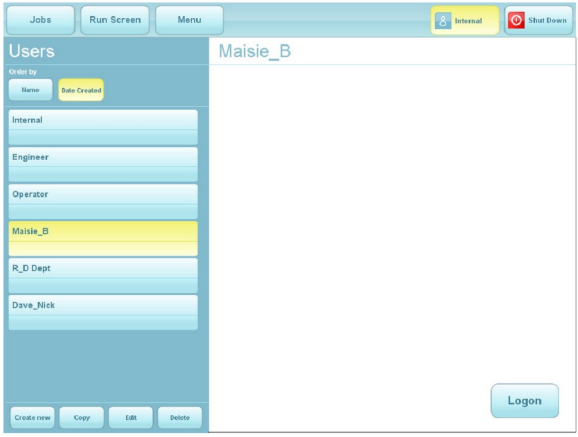
## How to switch the user

Each user has their own password and access rights, allocated by the Supervisor. To switch user, the password must be known.

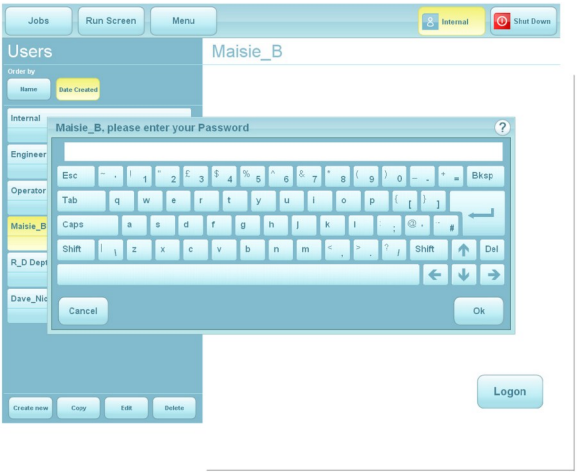
1. Press the Switch User button in the Job screen




2. Select the user from the list. Use the scroll arrows if necessary.
3. Press the **Logon** button.



4. Enter the password using either the keyboard or the on-screen keypad. The user has now changed.




## User Access Rights

There are 4 levels of access rights that can be allocated to each user. These are described below:

| Rights | Operator | Expert Operator | Engineer | Supervisor |
|---|---|---|---|---|
| Change Jobs | Y | Y | Y | Y |
| Run Machine | Y | Y | Y | Y |
| Programme Jobs with Wizard | N | Y | Y | Y |
| Add items to Libraries from Wizard | N | Y | Y | Y |
| Add Items to Libraries from Outside Wizard | N | N | Y | Y |
| Mechanical Fine tuning | N | N | Y | Y |

| | | | | |
|---|---|---|---|---|
| Document Fine tuning | N | Y | Y | Y |
| Enter Service Menu | N | N | Y | Y |
| Enter Admin Menu | N | N | Y | Y |
| PC Shutdown on Exit? | N | N | Y | Y |

Additionally, the ‘System Security Level’ can be set by a Supervisor. This is the level where a user does not have to enter a password to perform certain operations. Any access rights needed above this level will require the user to logon with a password.

| **Level** | | **Effective role of ‘Operator’** | **Description** | **On Startup** |
|---|---|---|---|---|
| Low (default) | Least secure | Expert Operator | Operator can run/edit/ create jobs but cannot access the main menu. | Job screen displayed |
| Medium | More secure | Standard Operator | Operator can only run jobs. | Job screen displayed |
| High | Most secure | None | Operator’ has no access to the system. All users have to logon. | User screen displayed |

# 7 Creating a job

## Creating a job

Creating a job consists of a number of steps:

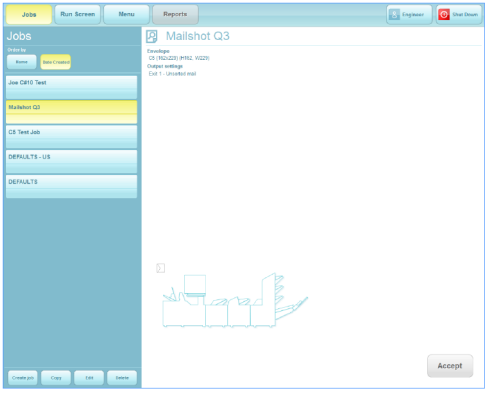
- Defining the Mailset (Envelope, document & enclosures)
- Defining the Fold Settings
- Setting required Output Options
- Saving the Job to a Jobname

When defining the Document in the Mailset, OMR or Barcode definitions can be enabled if required.

For an OMR of Barcode definition to be used it must first have been created - see Creating a document

## Creating the Job Settings

1. Press the **Create Job** button in the Job screen.

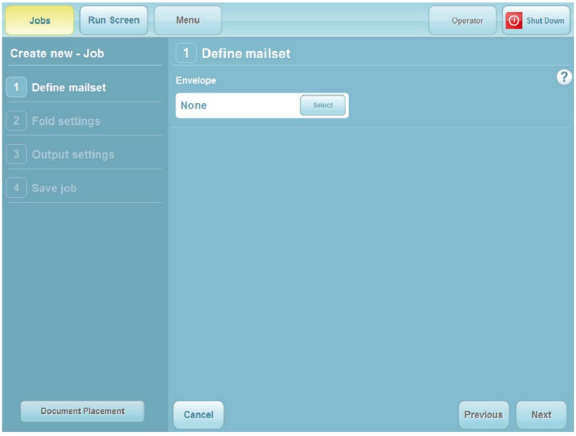



You will now need to define the mailset (envelope, documents and enclosures). This is described on the following page.

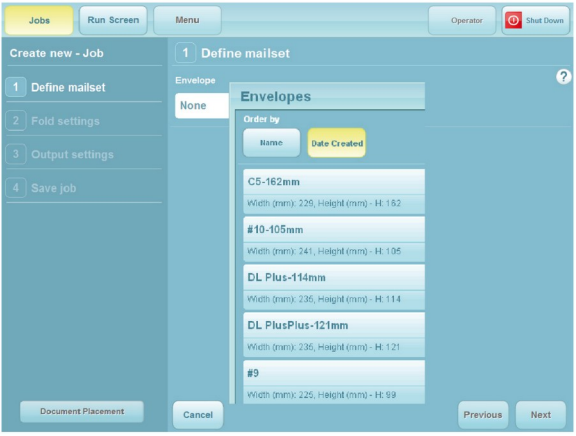
# Defining the mailset

### Selecting the envelope

1. Press the **Select** button to choose an envelope from the available library.

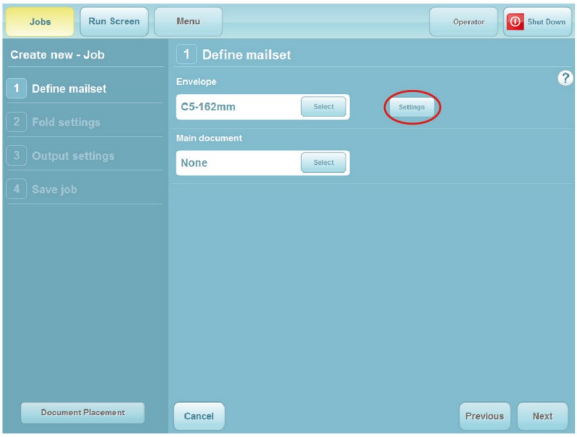



2. Select the required envelope from the library and press the **OK** button.

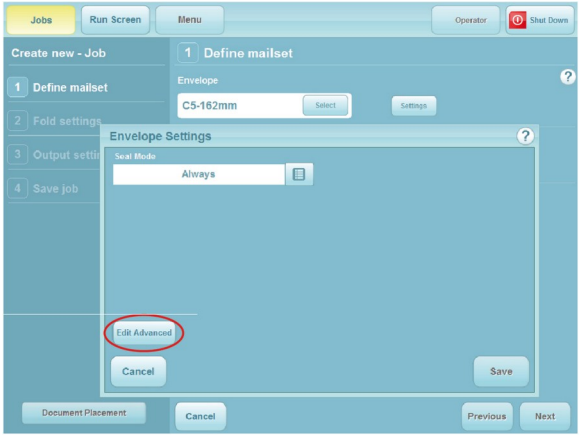



If there are no envelopes in the library, or if you wish to create a new one, see Creating an envelope on page 45.

3. You now have a choice: carry on to select a document, or further define the envelope usage, ie. sealing mode and deskew.
The following assumes you want to further define the envelope usage. When you have finished you will return to the screen shown here.
Press the **Settings** button.



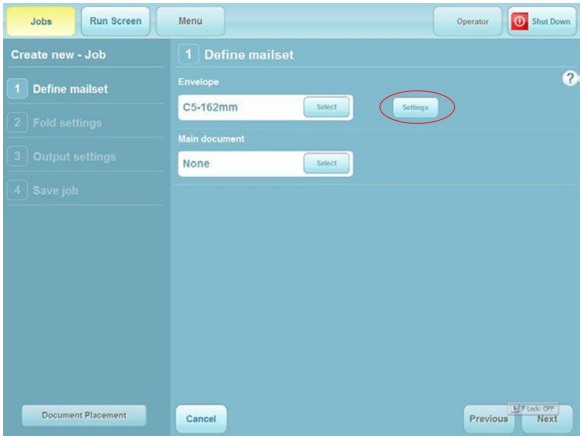

4. Select the required Sealing mode (usually this will be ‘Always’).Press the **Edit advanced** button if you wish to change the deskew setting.



**5.** From here, you can turn adjust the degree of deskew, or turn it off if you require. This might be done to speed the machine up if, for example, an envelope is unlikely to skew, eg. a C5 or other longer envelope. The default deskew setting is ‘Low’.


**Selecting the document**

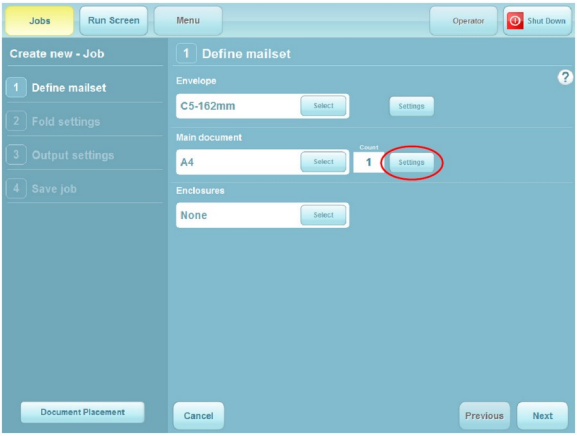
**1.** Press the **Select** button to choose a document from the available library.



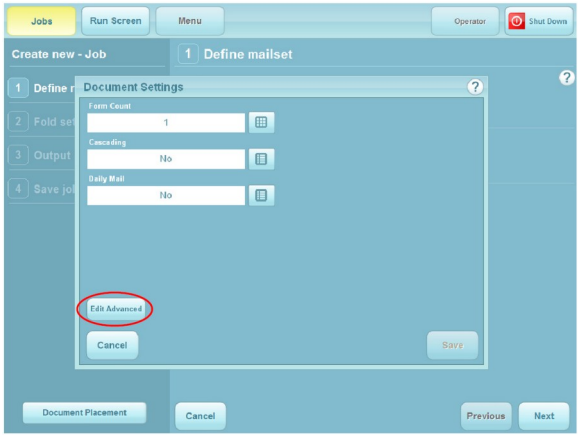
2. Select the required document from the library and press the **OK** button.


If there are no documents in the library, or if you wish to create a new one, see Creating a document on page 47

3. You now have a choice: carry on to select enclosures, or further define the document usage, eg. form count, cascading, hand-feed etc.
The following assumes you want to further define the document usage. When you have finished you will return to the screen shown here.
Press the **Settings** button.



4. Adjust the forms count if using multiples, whether or not cascading is to be used, whether or not daily mail (hand-feed) is to be used or whether or not External feed (FFPD) is to be used. Press the **OK** button when done. For further settings, press the **Edit Advanced** button.



5. If you wish to choose an orientation other than the auto-selected default, press **Auto** to enable the selector button.


If required adjust the degree of deskew, or turn it off if you require, for example if a document type is found to feed reliably without skewing.

Thickness doubles can currently be checked optically only on a flex folder, or turned off, if for example, documents are substantially different from the calibration document, such as abnormally dark with heavy printing.

Selecting '**Auto**' allows the software to choose between optical and mechanical checking if the document is moved to a versatile feeder fitted with a mechanical system.

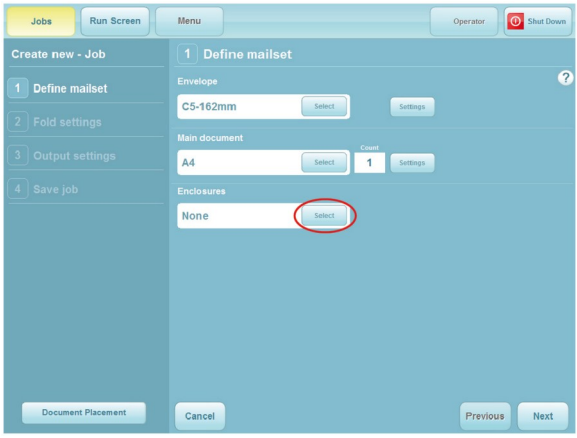
Feed control mode is '**Feed Always**' as default, but can be turned off to disable the hopper. It can also e set to '**Selective Feed**' for reading-enabled units. This works in conjunction with '**Item ID**' .

Item ID allows you to define an ID number for the document which accords with the relevant Select mark in the OMR or Barcode label. This will then feed the document when that mark is read.

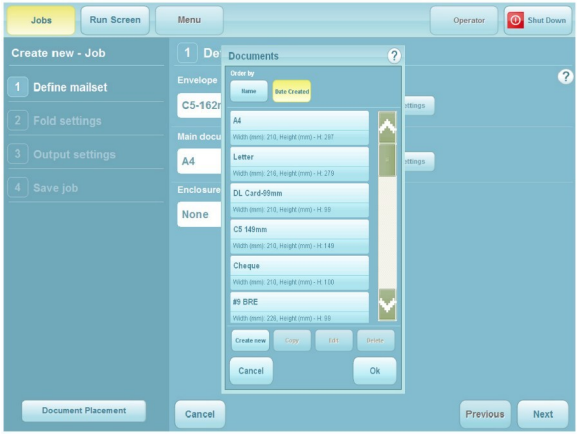
Sequence handling mode determines how sequence marks (if used) are handled when a document set is broken up (for example, to change a job in the middle of a document set). The mode must be set to '**Full**' for the first pass, and then changed to '**Mailset**' for the second pass after the job has been changed. The machine will not then expect an unbroken sequence.

### Selecting the enclosure

1. If you are using enclosures (inserts, BREs, booklets etc.), press the **Select** button.

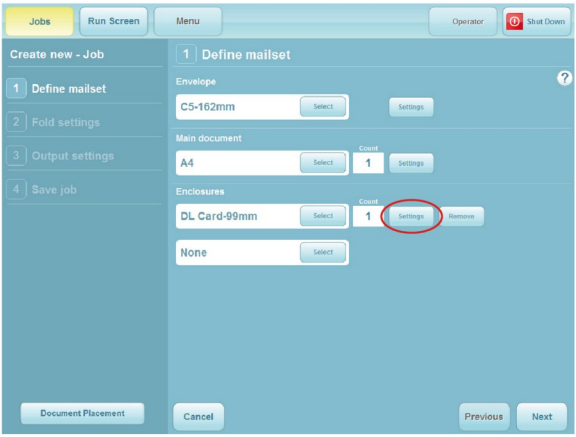



2. Select the required enclosure from the library and press the **OK** button.




If there are no enclosures in the library, or if you wish to create a new one, see section Creating an enclosure on page 50.

3. You now have a choice: carry on to select further enclosures if required, remove the enclosure you have selected, or further define the enclosure usage, eg. form count, cascading, handfold etc.
The following assumes you want to further define the enclosure usage. When you have finished you will return to the screen shown here.
Press the **Settings** button. **Settings and Advanced Settings are same for enclosures as for documents- see steps 4,5 of section Selecting the document**




Paper is normally loaded in the Tower face-up and feet-first if non-reading, face down and head-first if reading. **This may vary**: see also orientation chart in Loading the flex folder hoppers

4. If further enclosures are required, press the **Select** button and repeat steps 1 to 4.

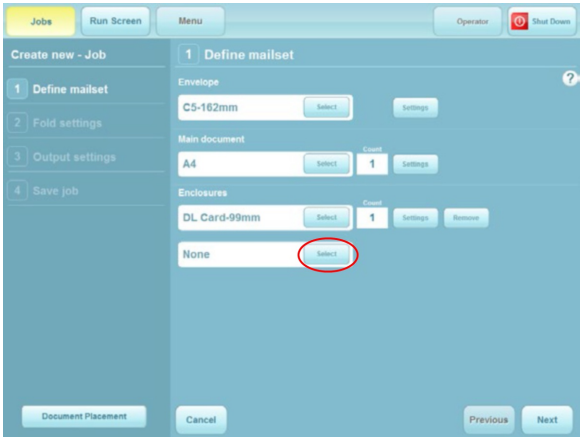
   Repeat as required up to the limit of available stations.

   You now have a choice: to proceed and move on to Fold Settings, or to assign the documents/enclosures to specific hoppers.

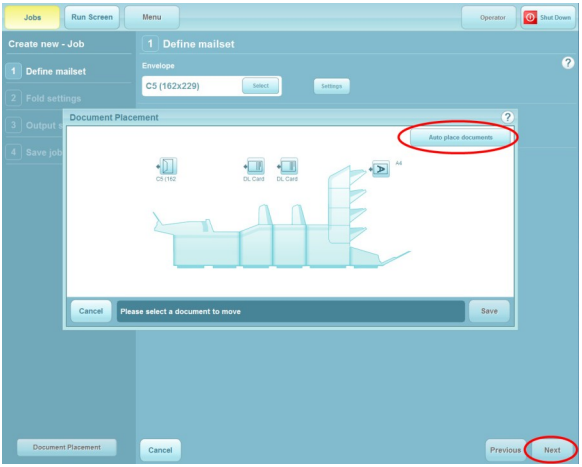
   The following assumes you want to assign the documents/enclosures to specific hoppers. This will override the hopper that the software automatically assigns.

   **If you do not want to assign the documents/enclosures to specific hoppers, press the Next button shown in the previous screen.**

   Otherwise, press the **Document Placement** button shown in the previous screen. This will display a placement box:



5. Select the document that you want to move, then select the hopper that you want to assign it to.
If you want to undo a manual placement, press '**Auto place documents**' to revert. Otherwise press '**Save**'.

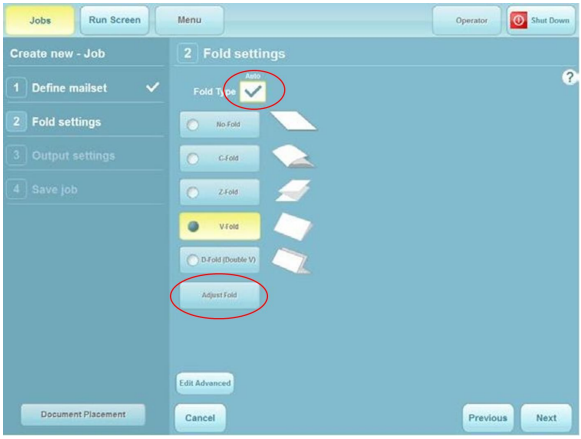



The mailset is now defined, and the screen will show that this is chosen.

# Defining the fold

You will now define the fold settings.

1. The machine will automatically select the optimum fold type. If you wish to change this, deselect '**Auto**' and set the required fold.

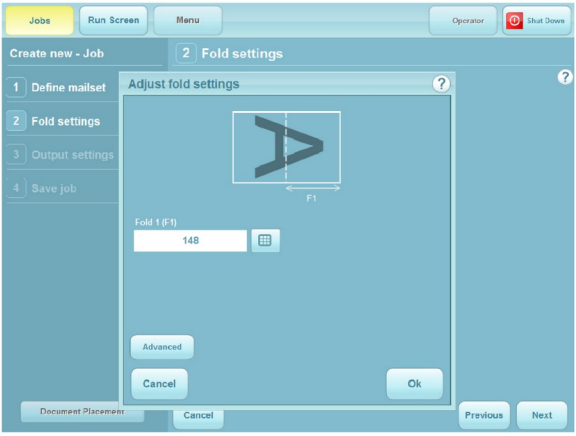



**The machine may not perform properly if you change the fold type incorrectly.**

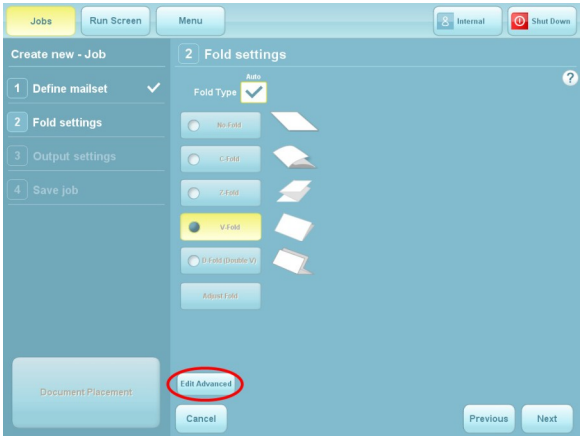
If you wish to make adjustments to the fold lengths, or just check them, press the **Adjust fold** button.

2. Make adjustments as required and press the **OK** button.

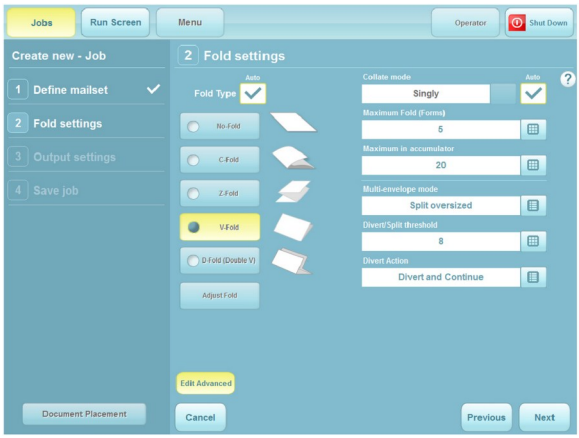
For Max. & Min. fold lengths for each fold plate, see 'Technical Specifications on page 81'.




3. If you wish to make adjustments to the collation mode or Max no. of sheets folded together, press the **Edit advanced** button.



4. Choose whether to collate leading edges of documents as they feed through the folder, then folded together without entering the accumulator, or to feed separately into the accumulator before folding. Sheets are fed singly by default, so each sheet is folded and inserted separately. Set max number for folding together. Groups bigger than this will be split into a) max number, followed by b) remainder.




The maximum that can be fed into the accumulator defaults to 9 (Max. collate), but can be up to 25.

This will depend upon the paper type.

Multi-envelope mode allows two separate jobs to be run in succession using the same document set. If set to ‘Split Oversize’, this splits, folds and inserts as for ‘Max Fold’ described above. If set to ‘Divert Oversize’, all groups numbering greater than the number set in ‘Divert/Split Threshold’ will be diverted to the divert tray, and if set to ‘Divert Undersize’, the same will apply for groups below the threshold.

The machine is then stopped, the job is changed and the forms in the divert tray are put back into the document set, and the new job is run.

‘Divert Action’ allows the option of the machine stopping automatically upon divert, or to continue, allowing the operator to intervene.

When you have finished, fold settings are now complete and the screen will show that this is ticked.**See also Table 1 on the following page.**

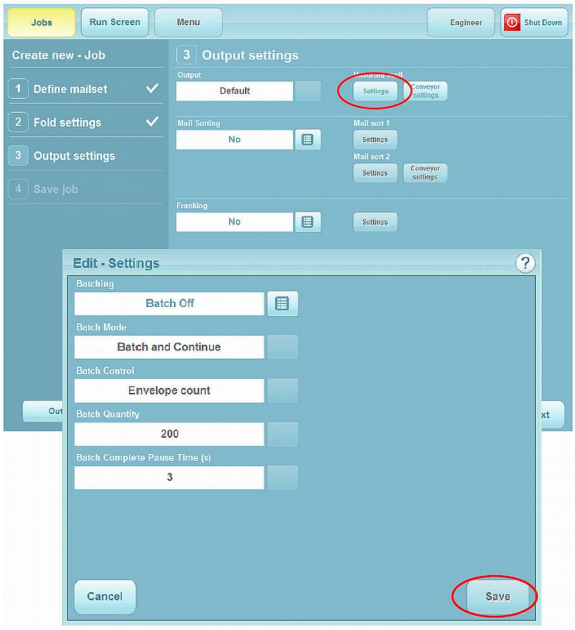
**Table 1**
**Handling of folded forms**

Shown below are handling of oversized/undersized groups under different circumstances.

| Multi envelope mode | Maximum Fold | Maximum in accumulator | Divert/Split threshold | Comment |
|---|---|---|---|---|
| Split oversized | When folding, the group or sub-group is folded on reaching this limit | When not folding or diverting, the group or subgroup is ejected towards divert or head unit on reaching this limit | Not used | Mechanical limits of folder and accumulator for given stationery |
| Divert oversized | Not used (As for Split Oversize if oversize not yet detected). | Not used (As for Split Oversize). | The complete group is assembled in the accumulator and then diverted if prime document count is equal or greater than this limit | Typically used for diverting large groups for re-processing into a larger envelope |
| Divert undersized | Not used (As for Split Oversize if undersize not yet detected). | Not used (As for Split Oversize). | The complete group is assembled in the accumulator and then diverted if prime document count is less than this limit | Typically used for diverting small groups for re-processing into a smaller envelope |

# Defining the output settings

1. Select **Settings** for Unsorted Mail in the Output Settings screen.



2. Set **Batching** to Batch On if required and set required quantity in **Batch Quantity**.Set **Batch Mode** as follows:

**Batch and Continue:**
Machine will pause for the specified pause time, and then resume.

Conveyor will continue to run during the pause time.

**Batch and Stop:**
Machine will stop and resume only when the Run button is pressed.

Select **Envelope Count** under **Batch Control,** currently the only available option.

Set the **Batch Complete Pause Time** as described in **Batch and Continue** above.

When settings are complete, press the **Save** button.

3. If a conveyor is fitted, select **Conveyor Settings** to adjust the Jog functions as follows:

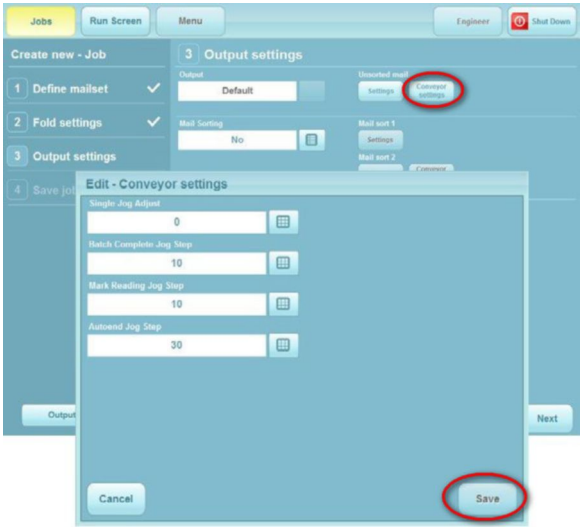
**Single Jog Adjust:** Adjusts default jog step (gap) between mailpieces. Note that steps are unitless.

**Batch Complete Jog Step:** Adjusts gap before machine performs action described in 'Batch Mode'.

**Mark Reading Jog Step:** Adjusts gap created after Jog mark is read.

**Autoend Jog Step:** Adjusts gap created before machine autoends.

When settings are complete, press the **Save** button.



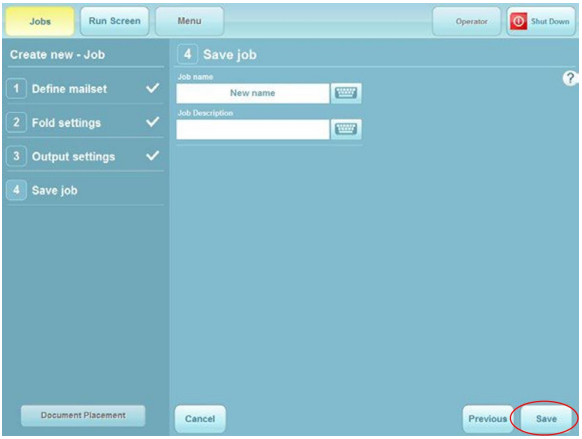
**Output Settings for unsorted mail are now complete. If you are using Mail Sorting, refer to the INF Output Sorter Operator Manual.**

The output settings are now defined, and the screen will show that this is ticked.

**You will now save the job.**

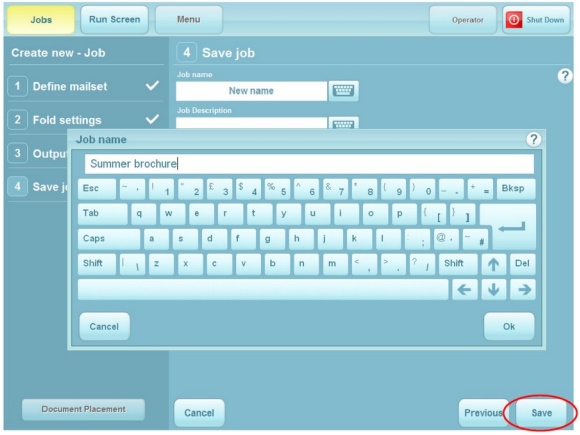
# Saving the job

1. Press the keyboard icon to display the virtual keyboard.




2. Enter a name for the job using either the virtual or physical keyboard.

   Repeat steps 1 & 2 to enter a brief description for the job. This is the description that will appear in the job list when the machine is started.



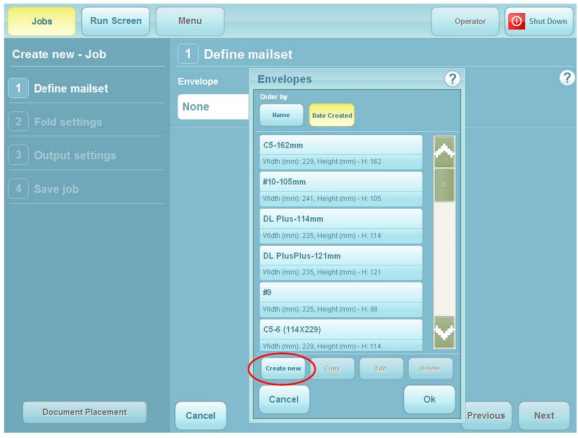

3. Enter a name for the job using either the virtual or physical keyboard.

**You have now successfully created a new job and it will appear in the job list.**

# Creating an envelope

In order for an envelope to appear in the envelope library, it must first be created.

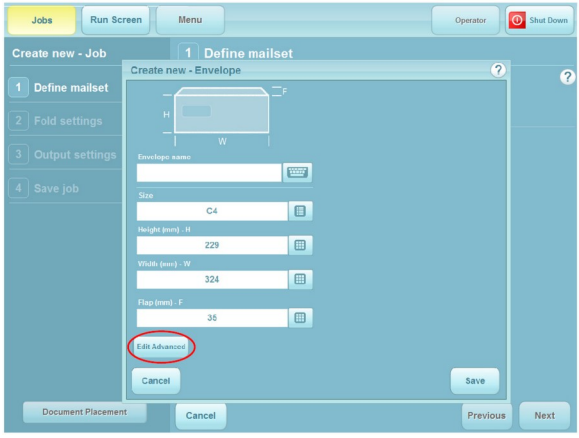
1. Begin creating a job (see Creating the Job Settings on page 26)
2. At the point where you need to select an envelope, press the **Create New** button.




3. Enter a name for the envelope: press the virtual keyboard icon and enter the name using either the physical or virtual keyboard.

   Select an envelope type. The default width and height for that type will then be shown. If you want to adjust the size, the type will change to ‘Custom’.

   If you want to adjust the envelope weight and flap depth, press the **Edit Advanced** button.

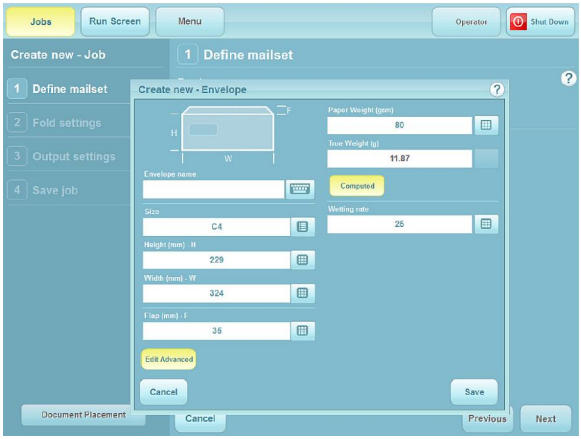


4. Adjust the weight as required. Note that the weight is the actual weight of the envelope, not the paper weight.

   Adjust the wetting rate if required. The number shown is the quantity of envelopes sealed before the pump tops up the wetter tank. Default is 25.

   Press the Save button when done.

   The envelope will now be available in the envelope library under the name you have given it.

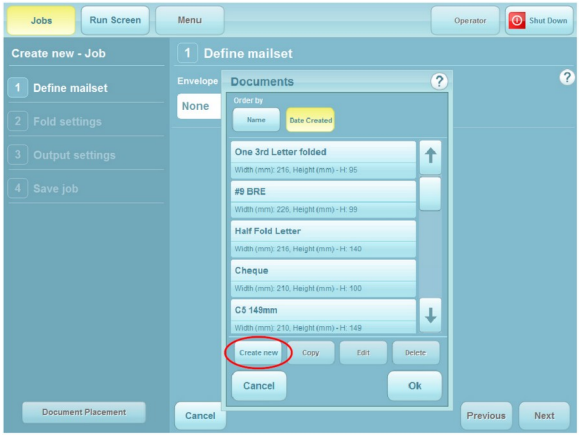



**The envelope is now fully defined and is available for use.**

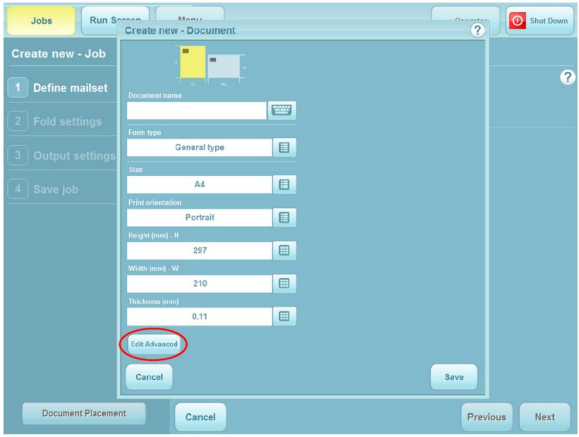
# Creating a document

In order for a document to appear in the document library, it must first be created.

1. Begin creating a job (see Creating the Job Settings on page 26)
2. At the point where you need to select a document, press the **Create New** button.




3. Enter a name for the document: press the virtual keyboard icon and enter the name using either the physical or virtual keyboard.
   Select a document type and size and orientation. The default width and height for that type will then be shown. If you want to adjust the size, the type will change to ‘Custom’. Change the thickness for thick documents, eg. booklets. If you want to make further adjustments, or select a reading definition, press the **Edit Advanced**



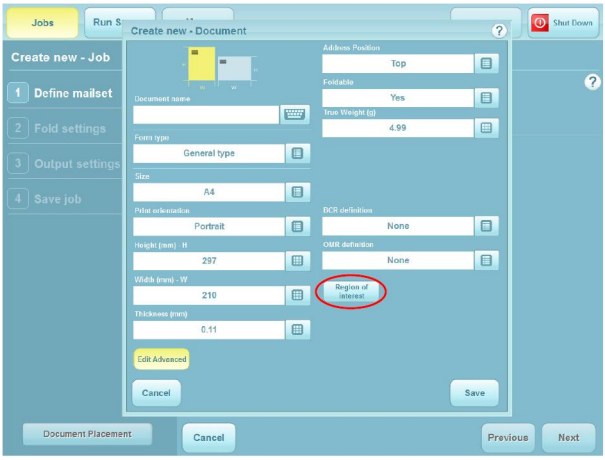
4. Select the address position. This defaults to ‘Top’; specify middle, bottom or none if required.

   Specify whether the document is to be folded (eg. a booklet would not be) and its thickness and weight. Note this is the actual weight of the document, not the paper weight.

   The thickness is more applicable to booklets - if no figure is specified, 80gsm paper will be assumed.

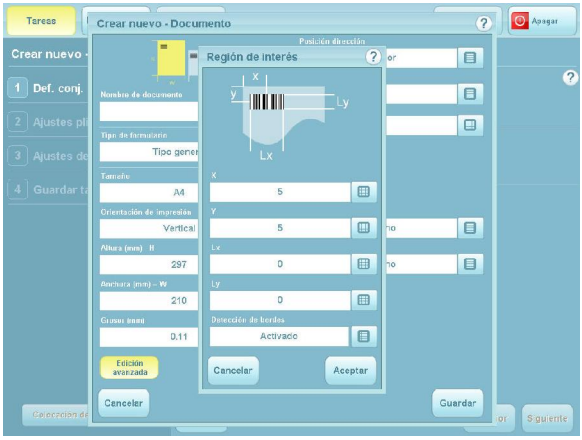
   If the document uses an OMR or barcode label, select a reading definition.

**This is obtained under licence as an option and must already exist on the machine.**




If the document does not use an OMR or barcode label, press the Save button, otherwise, proceed as follows.

5. Press the **Region of Interest** button to specify the position of the label.
6. Specify the position of the label and select whether edge detection is required – this detects the edge of the paper and should normally be **On**.
   **Turn Off** if coloured or densely printed paper is giving false readings: the machine will then use default dimensions for label position. Press the **Save** button when done.

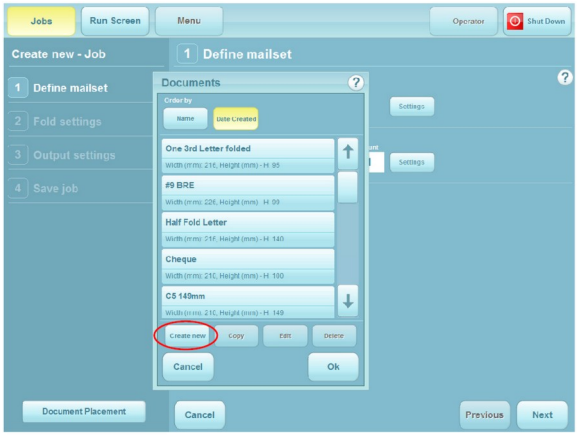



**The document is now fully defined and is available for use.**

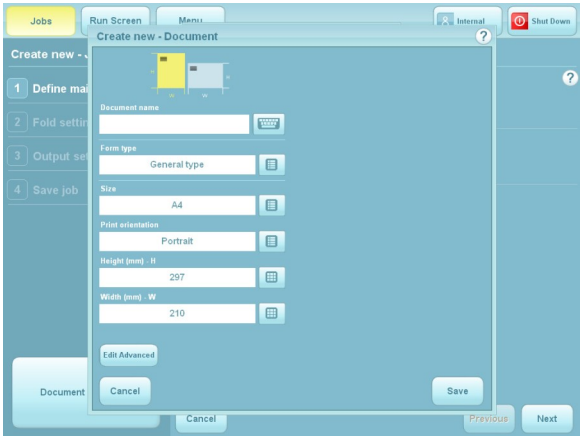
# Creating an enclosure

In order for an enclosure to appear in the enclosure library, it must first be created.

1. Begin creating a job (see Creating the Job Settings on page 26)
2. At the point where you need to select an enclosure, press the **Create New** button.




3. The procedure for defining an enclosure is the same as that for a document, described in Creating a document on page 47. It is the document type that you select that determines whether it appears in the document or enclosure library.
   See Creating a document on page 47 for the remainder of the settings.

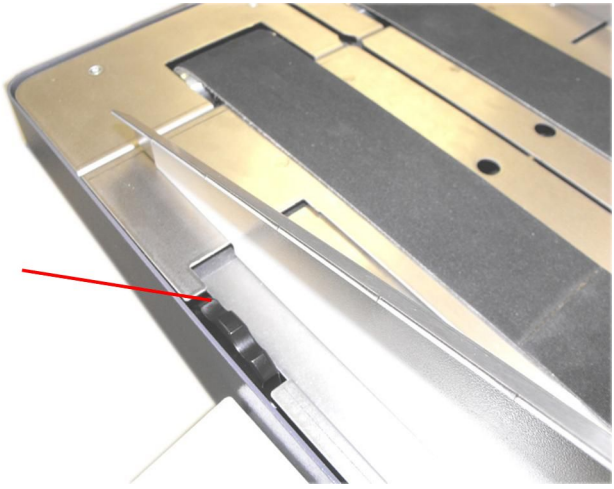



**The enclosure is now fully defined and is available for use.**

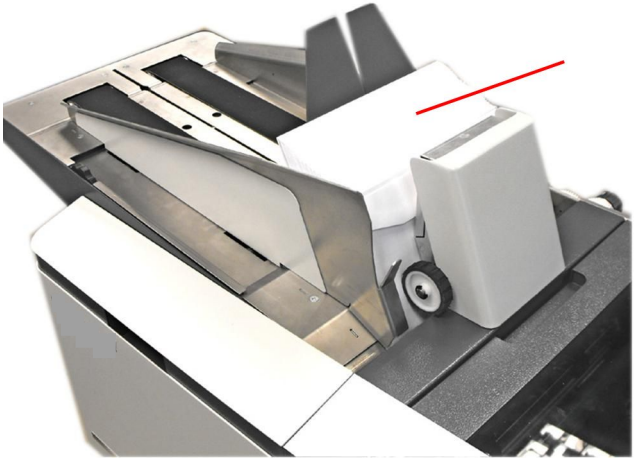
# 8 Loading the paper hoppers

## Loading the envelope hopper

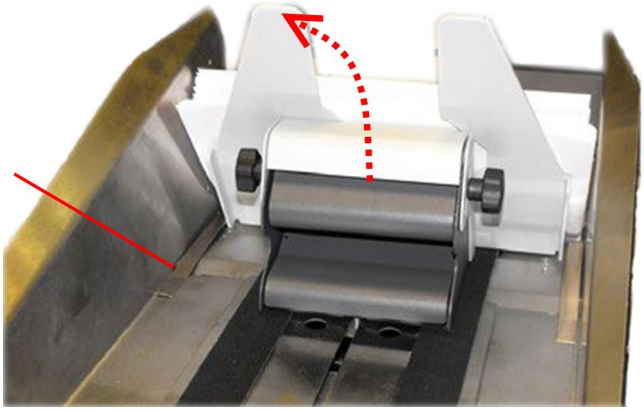
1. Using the black knob, adjust the side guide to give 1-1.5mm clearance each side of the envelope.



2. Adjust the angle of the backrest (see below) and load the envelopes into the hopper, flaps forward, so that the lower edges follow the contour of the surface and down into the pick-up roller. Move the backrest forward (see below) so the the envelopes are fully forward, but not tightly packed.



3. Move the backrest forward by squeezing the handle upwards to release the rollers from the track.
Adjust the width of the panels to suit the envelope.
Adjust the angle by loosening the knob each side.
C4: Fully raised
DL/DL+: Fully lowered

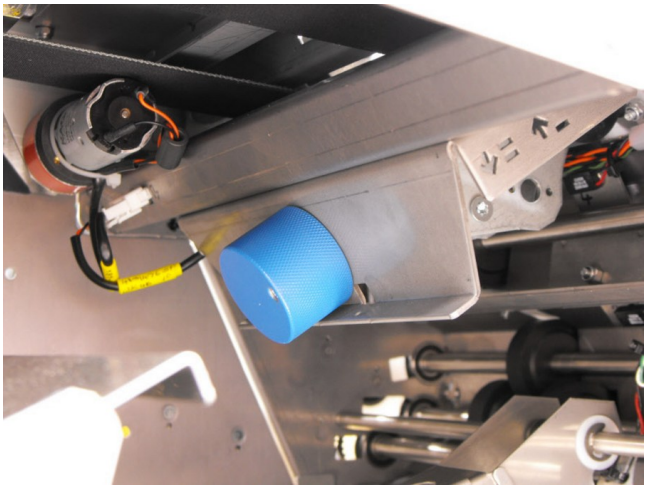


If the envelopes feed erratically, try a backrest angle in-between.

**Adjusting the envelope separator**

The separator prevents more than one envelope being fed at a time.

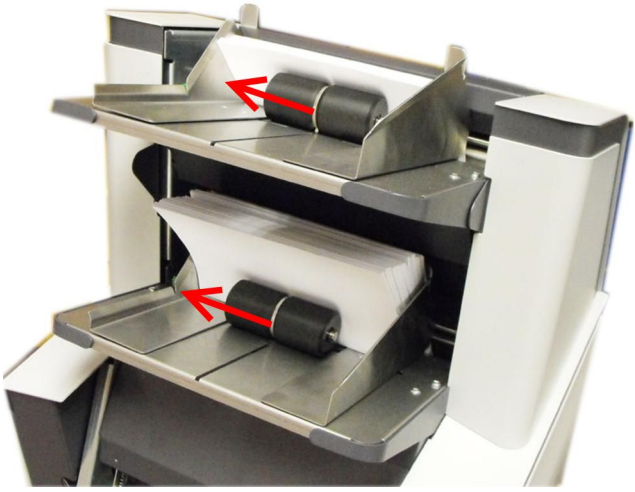
1. To adjust the separator, open the side cover on the insertion head; the adjustor knob is visible below the envelope conveyor. Turning clockwise decreases the gap, anti-clockwise increases it.



2. To set the separator gap, empty the hopper, then slide an envelope into the gap and turn the knob until the separator will just grip the envelope as you withdraw it.
3. Close the side cover when you have finished.

# Loading the feeder hopper

1. Move the guides to give 1 - 1.5mm clearance each side of the insert.



2. Draw back the weighted rollers and load the insert pack so that the leading edge is feeding into the nip of the feed rollers. Move the weighted roller forward to support the pack.

**Tower feeder is shown; single feeder is similar, with one hopper only.**

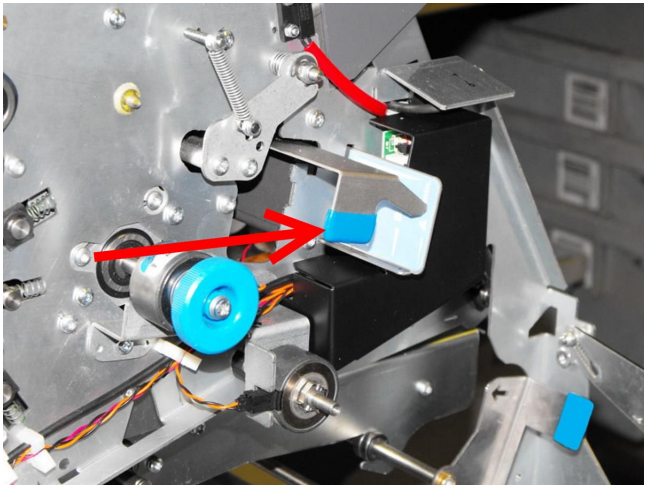
### Adjusting the separator

The separator prevents more than one enclosure being fed at a time.

1. The feeder separator has 4 settings, marked A to C on the slide. Before running the job, the gap must be set to suit the thickness of material being processed - this prevents

more than one item being fed at a time. Note that there is an intermediate setting between each marked position, allowing finer adjustment.

**Slide positions:**
A = 0 to 0.75mm
B = 0.75 to 1.5mm
C = 1.5 to 2.5mm
D = 2.5 to 4.0mm
(A - C only on Tower Feeder)



Most jobs will use position A. If you use the wrong setting, an error will appear on the control panel.

For problem enclosures, the feed rollers can be changed to optional alternatives.

# Loading the tower folder hoppers

The tower folder may be fitted with 500-sheet or 1000-sheet hoppers, or only a single 1000-sheet hopper. The example shown has 1 x 500-sheet and 1 x 1000-sheet hoppers.

**1.** On 500-sheet hoppers, loosen the black knob next to the side guides (arrowed) and move the guides to give 1-1.5mm clearance each side.

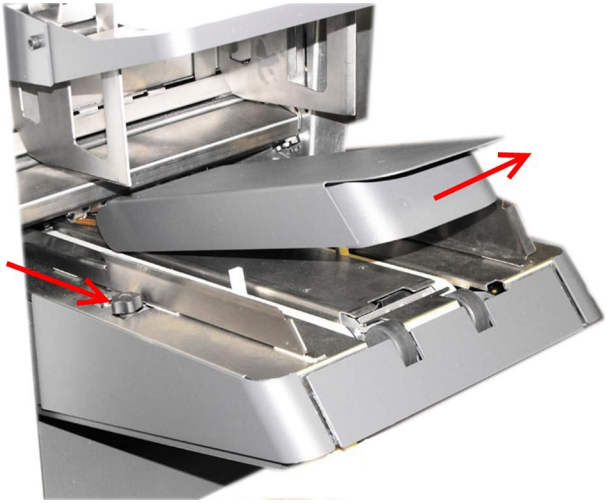
On 1000-sheet hoppers, press down on the tray to lower it. Loosen the black knob above the hopper (arrowed) and use the tabs to move the guides to give 1-1.5mm clearance each side. The tray will raise automatically when the machine is started.

**2.** Tighten the knobs.

Paper orientation in the hoppers will depend upon the job requirement - see the paper orientation chart.

**Accumulator**

The accumulator side guides must be adjusted
to suit the paper - use the preset size markings to set the paper width.



1. Raise the top of the accumulator so that it locks in place and place a piece of paper between the side guides.
2. Loosen the black knob next to the side guides (arrowed) and move the guides to give 1-1.5mm clearance each side.
3. Pull out the handle at the end (arrowed) to lower the accumulator top.

### Adjusting the separator

The separator prevents more than one document being fed at a time.

1. Open the side cover on the operator side and turn the knob in the required direction to open or close the gap. The markings next to the knob indicate which direction to turn it.

**2.** To set the separator gap, empty the hopper, then slide a form into the gap and turn the knob until the separator will just grip the form as you withdraw it.

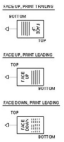
**Table 2**

**Paper Orientations**

Paper orientations for various applications are shown below.

European Sizes:

| Tower Fold Configurations | | | Form Input Orientation | | | Fold Pannel Lengths | | | |
|---|---|---|---|---|---|---|---|---|---|
| UK & European Sizes | | | | | | | | | |
| Job Code | Job Description | Fold Type | Face Down Head First | Face Down Feet First | Face Up Feed First | Fold Plate 1 | Fold Plate 2 | Fold Plate 3 | |
| CF1 | A4 Form (297mm x 210mm) Document printed with **top** address | "C" Fold | ✔ | | | 68mm (121mm long envelope 90mm (110mm long envelope) | | 115mm (121mm long envelope) 104mm (110mm long envelope) | |
| CF2 | A4 Form (297mm x 210mm) Document printed with **middle** address | "C" Fold | ✔ | | | 183mm (121mm long envelope) 194mm (110mm long envelope) | 115mm (121mm long envelope ) 104mm (110mm long envelope) | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| CF3 | A4 Form (297mm x 210mm) Document printed with **bottom** address Address upside down in window | "C" Fold | | ✔ | | 60mm (121mm long envelope) 90mm (110mm long envelope) | | 115mm (121mm long envelope) 104mm (110mm long envelope) |  |
| ZF1 | A4 Form (297mm x 210mm) Document printed with **top** address | "Z" Fold | | | ✔ | 229mm (121mm long envelope) 103mm (110mm long envelope) | | 115mm (121mm long envelope) 104mm (110mm long envelope) | |
| ZF2 | A4 Form (297mm x 210mm) Document printed with **top** address | "Z" Fold | ✔ | | | | 68mm (121mm long envelope 90mm (110mm long envelope) | 115mm (121mm long envelope) 104mm (110mm long envelope) | |
| ZF3 | | "Z" Fold | | ✔ | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A4 Form (297mm x 210mm) Document printed with **bottom** address | | | | | 114mm (121mm long envelope) 103mm (110mm long envelope) | 115mm (121mm long envelope) 104mm (110mm long envelope) | | |
| VF1 | A4 Form (297mm x 210mm) Document printed with **top** address | "V" Fold | ✔ | | | 149mm | | | |
| VF2 | A4 Form (297mm x 210mm) Document printed with **bottom** address Address upside down in window | "V" Fold | ✔ | | | 149mm | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DFF1 | Europ-con 16" torm (106mm x 210mm) Docu-ment printed with **top** ad-dress | Double For-ward Fold | ✔ | | | 177mm (121mm long envel-ope) 199mm (110mm long envel-ope) | | 115mm (121mm long envel-ope) 104mm (110mm long envel-ope) | |
| DFF2 | Europ-con 16" tm(06mm x 210mm) Docu-ment printed with **bot-tom** ad-dress Ad-dress upside down in win-dow | Double For-ward Fold | | ✔ | | 177mm (121mm long envel-ope) 199mm (110mm long envel-ope) | | 115mm (121mm long envel-ope) 104mm (110mm long envel-ope) | |

American Sizes:

| D16403 Tower Fold Configurations | | | Orientation In Hopper | | | Fold Pannel Lengths | | | |
|---|---|---|---|---|---|---|---|---|---|
| American Sizes | | | Face Down Head First | Face Down Feet First | Face Up Feed First | Fold Plate 1 | Fold Plate 2 | Fold Plate 3 | |
| Job Code | Job Description | Fold Type | | | | | | | |
| ACF1 | US Letter format (11" x 8½") Document printed with **top** address | "C" Fold | ✔ | | | 02mm (#10 Envelope) | | 99mm (#10 Envelope) | |
| ACF2 | US Letter format (11" x 8½") Document printed with **middle** address | "C" Fold | ✔ | | | 181mm (#10 Envelope) | 99mm (#10 Envelope) | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ACF3 | US Letter format (11" x 806") Document printed with **bottom** address | "C" Fold | | ✔ | | 82mm (#10 Envelope) | | 99mm (#10 Envelope) | |
| AZF1 | US Letter format (11" x 8½") Document printed with **top** address | "Z" Fold | | | ✔ | 197mm (#10 Envelope) | | 99mm (#10 Envelope) |  |
| AZF2 | US Letter format (11" x 806") Document printed with **top** address | "Z" Fold | ✔ | | | | 82mm (#10 Envelope) | 99mm (#10 Envelope) | |
| AZF3 | US Letter format (11" x 8½") Document printed with **bottom** address | "Z" Fold | | ✔ | | 98mm (#10 Envelope) | 33mm (#10 Envelope) | | |
| AVF1 | | | | | | 140mm | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | US Letter format (11" x 8½") Document printed with **top** address | "V" Fold | ✔ | | | | | | |
| AVF2 | US Letter format (11" x 8½") Document printed with **bottom** address Address upside down in window | "V" Fold | ✔ | | | 110mm | | | |
| AD-FF1 | US Legal format (14" x 8½") Document printed with **top** address | Double Forward Fold | ✔ | | | 197mm (# Envelope) | | 99mm (#10 Envelope) | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| AD-FF2 | US Legal format (14" x 8½") Document printed with **bottom** address Address upside down in window | Double Forward Fold | | ✔ | | 197mm (# Envelope) | | 99mm (#10 Envelope) | |

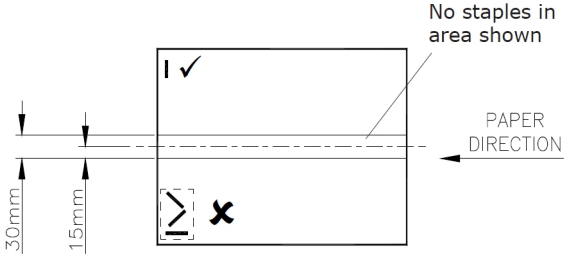


## Daily Mail (Tower Folder)

Daily mail allows a group of forms to be hand-fed, folded and inserted on a Flex Folder or Versatile Feeder. This section descibes the Flex Folder – see Flex Folder for Versatile Feeder.

A group of forms up to a total of 6mm thick may be fed, but be aware of the folding capacity of 8 forms of 80gsm (20lbs bond). The forms may be stapled or not, as required (see below for stapling restrictions).

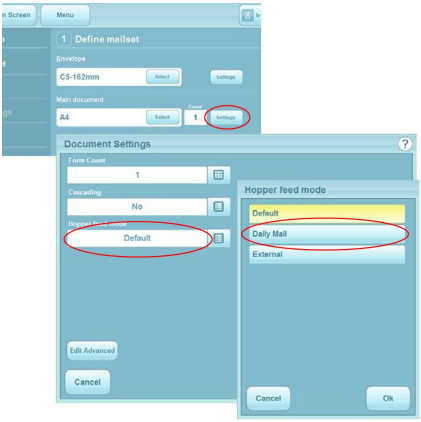
### Stapling Restrictions

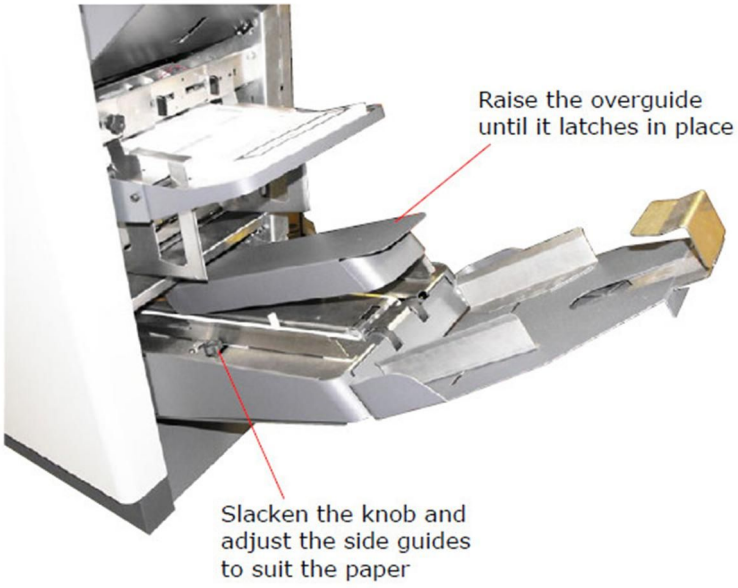


# Using Daily Mail

To use daily mail, define a new mailset (as described in Defining the mailset on page 27) or edit the document settings in an existing job.

Select **Settings** for the document and set 'Hopper feed mode' to **Daily Mail**.



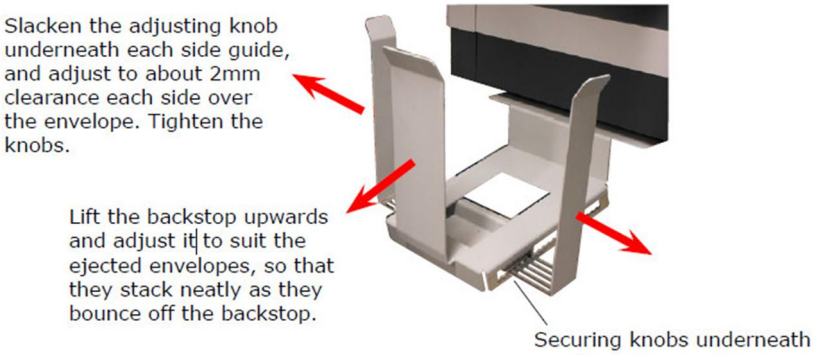
When daily mail has been enabled as described, press the **Run** button and feed the post into the accumulator tray. The machine will wait for 30 seconds after pressing the button - if you exceed this before inserting the documents, press the button again.

To turn the function off, switch ‘Hopper feed mode’ back to **Default** in Document Settings.

You may find it easier to feed the paper by unhooking the divert tray and removing it.

## Adjusting the catch tray

If a Catch Tray is being used for ejected envelopes, it should be adjusted to suit the ejected envelopes.



# 9 Operator Maintenance

## Cleaning the sensors

The optical sensors consist of two halves: emitter and receiver. These can become obstructed due to paper dust and should periodicaly be cleaned using a nonflammable airduster. Both halves must be cleaned.

This section shows where the sensors are located. For most sensors, an indicator arrow is pierced showing you where the jet of the airduster should be directed. For some sensors, the retaining bush is visible next to the lens: ensure you spray into the lens, not the bush.

## Cleaning the sensors

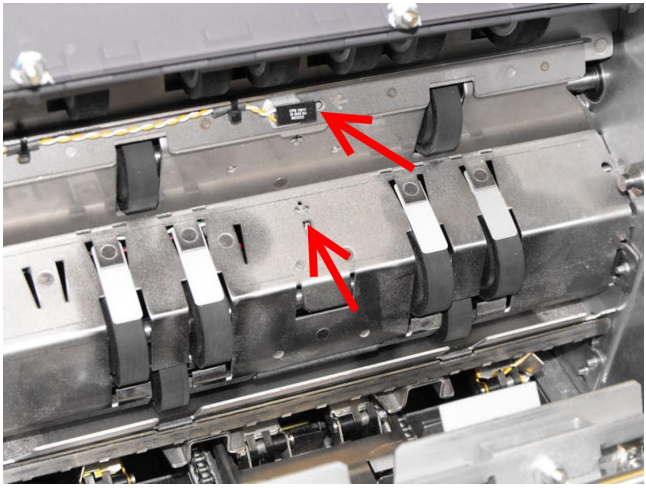
Sensors are retained with a bush next to the lens: where this is visible, ensure that you spray into the lens (arrowed), not the bush.



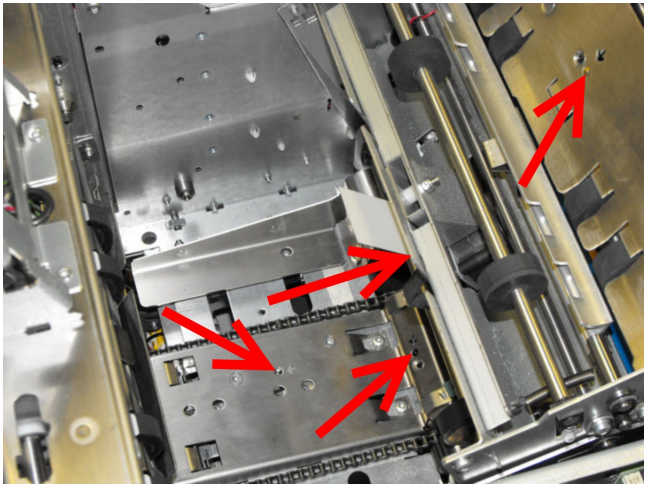
**Insertion head**

Direct the airduster into the openings arrowed and spray liberally.

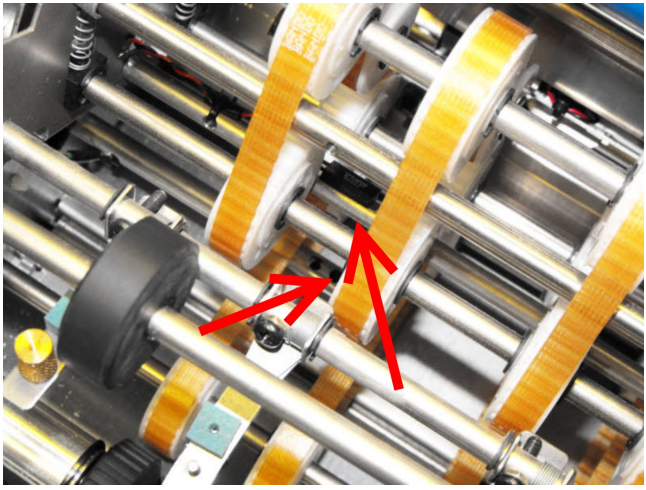
1. Open the perspex top cover and raise the collate clamshell (closest to the envelope hopper) so that it locks in place.
   Picture shown is viewed looking inside the collation area towards the envelope hopper



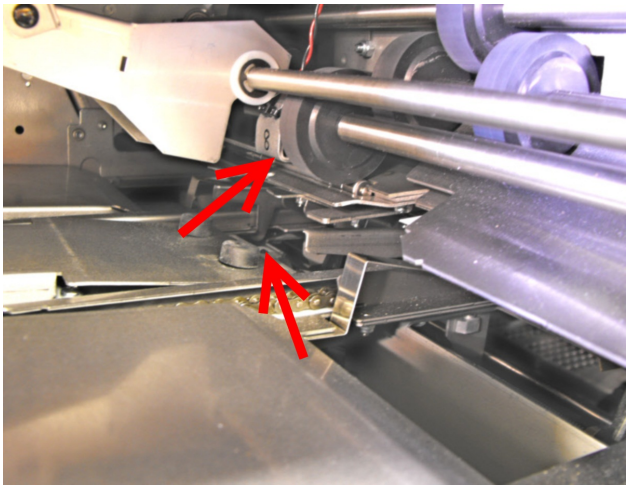
2. Picture is viewed looking inside the collation area away from the envelope hopper. Clean all sensors arrowed.



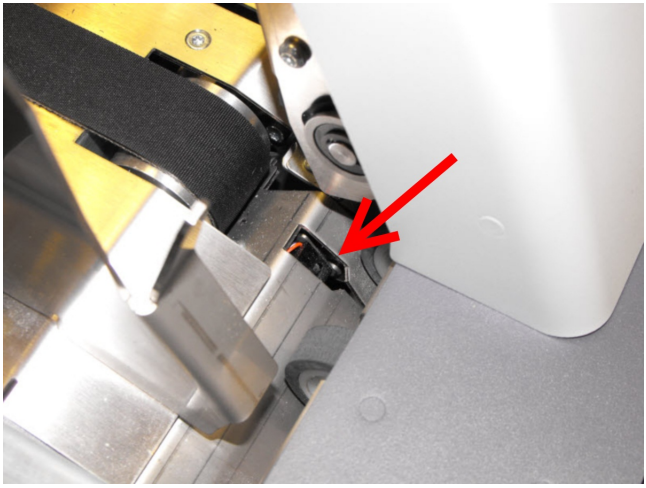
3. Lower the collate clamshell and open the upper conveyor (furthest from the envelope hopper) so that it locks in place.
Picture is viewed looking inside the collation area away from the envelope hopper. Insert the airduster nozzle deep into the hole and spray liberally. Note the the upper sensor half is not easy to see and is mounted on a bar.
Lower the conveyor.



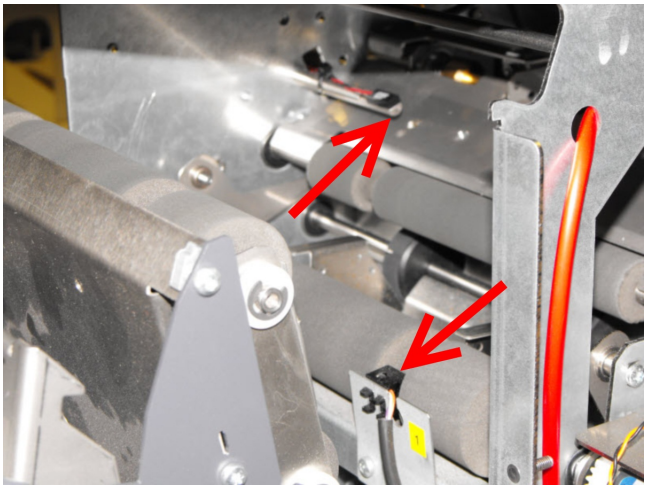
4. Lower the side cover and raise the overguide inside the closer cavity, latching it in place.
Clean the sensors arrowed.



5. Picture is viewed looking down on the envelope hopper, at the front.
Clean the one-piece reflective sensor.



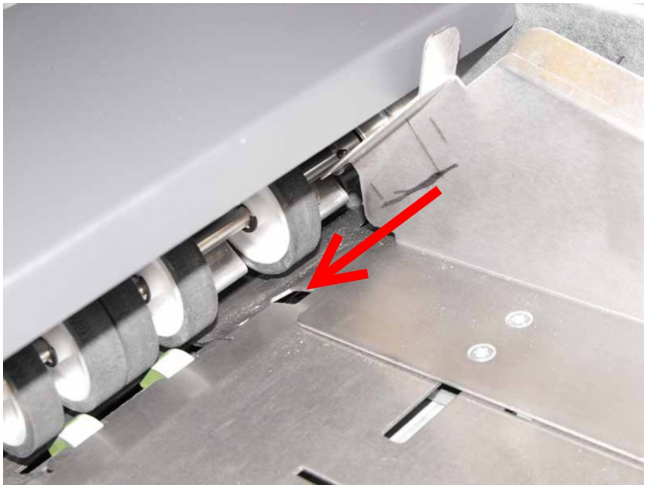
6. Lower the front output cover below the envelope feeder.
Clean the sensors indicated. Note that the upper sensor is in two halves. The lower sensor is a one-piece reflective type.



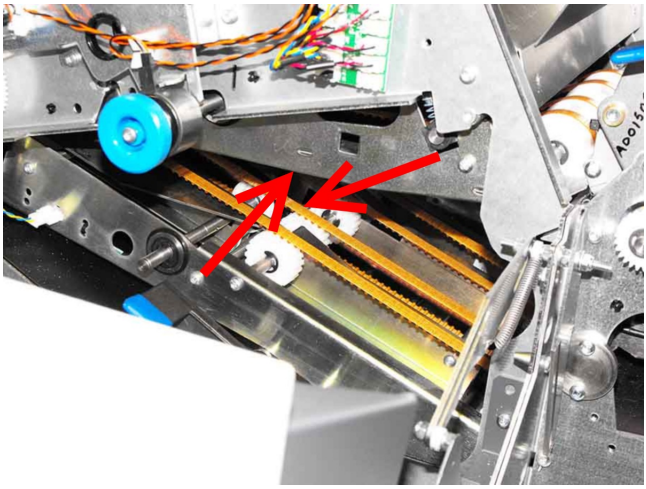
**Feeder**

There is a sensor on the feed hopper of a feeder, and a pair located in the lower conveyor section.

1. Remove all paper from the feed hopper and direct the airduster into the cutout indicated.



2. Open the side cover and push the lowermost lever forward to lower the conveyor.Clean the sensor located next to the gearwheel in the centre of the track as shown, with the upper half directly above it.



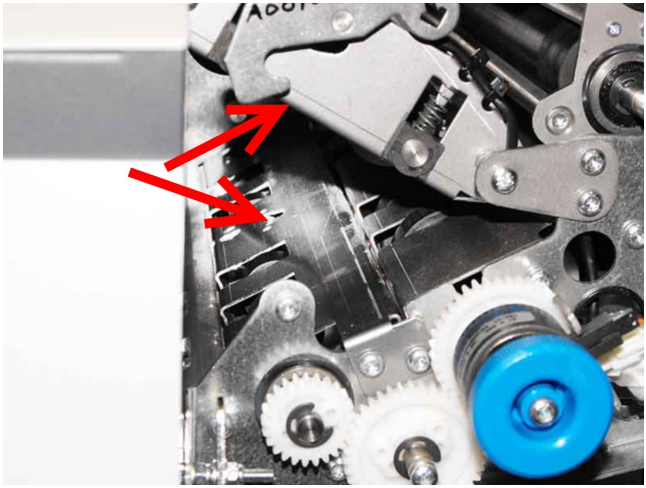
A single feeder is shown, twin-feeder is similar. Conveyor sensor applies also to feederfolder.

**Feeder-Folder**

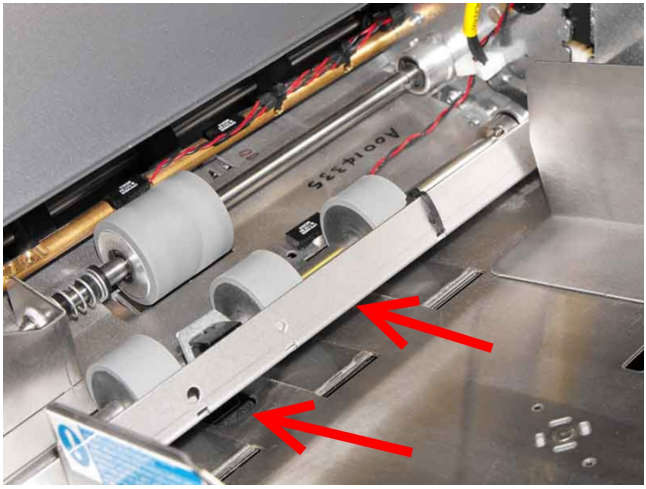
There is a sensor in the front transport assembly on a feeder-folder, and another two on the top. There is also one in the lower conveyor (see Feeder).

1. Raise the cover at the front of the feederfolder. Using the blue tab, release the latch of the transport assembly and lift it upwards. Direct the airduster into the cutouts indicated.

Ensure the lever is fully latched when closing.

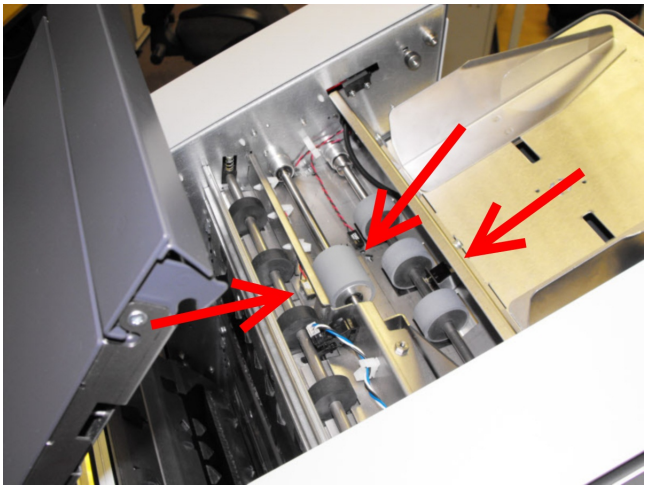


2. Raise the top cover. Direct the airduster into the cutout (the lower sensor in the picture), and into the gap to clean both halves of the upper sensor.



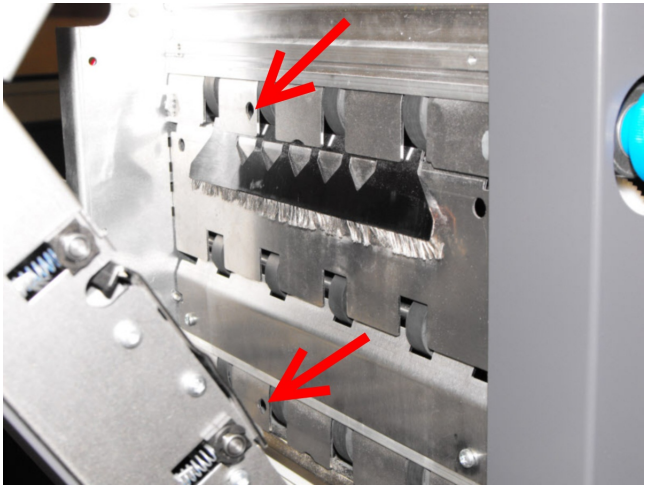
**Flex Folder**

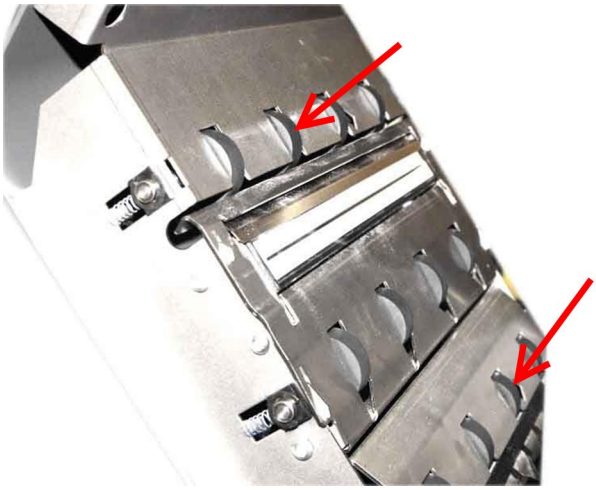
1. Open the folder top cover and clean the sensors indicated.Direct the jet into the gap under the sensors, or into the hole indicated.



2. Open the top cover open, direct the jet into the holes indicated.

Note: The sensors are in two halves, with the opposite halves located in the cover.



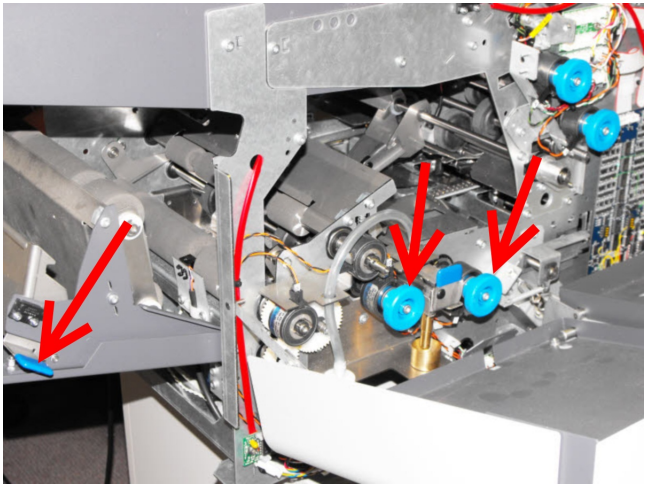


# Clearing paper jams

If paper jams occur, the area affected will normally be shown in the error message on the screen. Use one of the clearance methods described below to clear the jammed paper.

**Inserter Head**

1. Open the side cover on the operator side of the machine, and lower the front sealer cover.



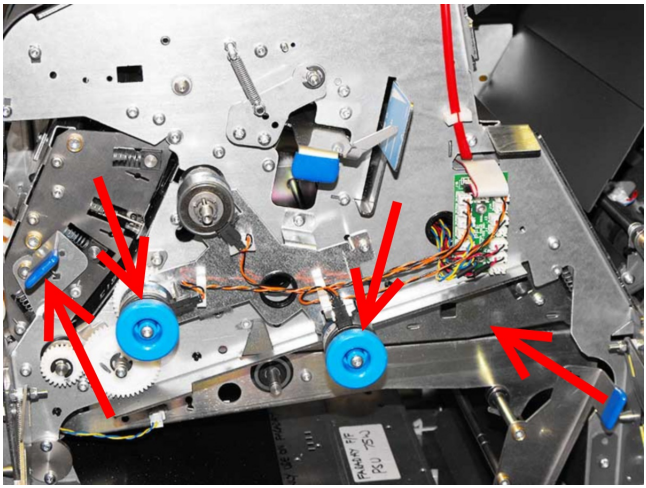
Check for jammed paper in the open cavities.

If the paper is not fully visible, turn the blue knobs to wind it into view.

Open the front closer cover using the blue tab and check for jammed paper.

**Feeder (Single and Twin) & Feeder Folder**

**1.** Open the side cover on the feeder.



Use the blue tabs to push forward the levers indicated to open the cavities and access the jammed paper.

If the paper is not fully visible, turn the blue knobs to wind it into view.

single feeder is shown; twin-feeder and feeder-folder are similar.

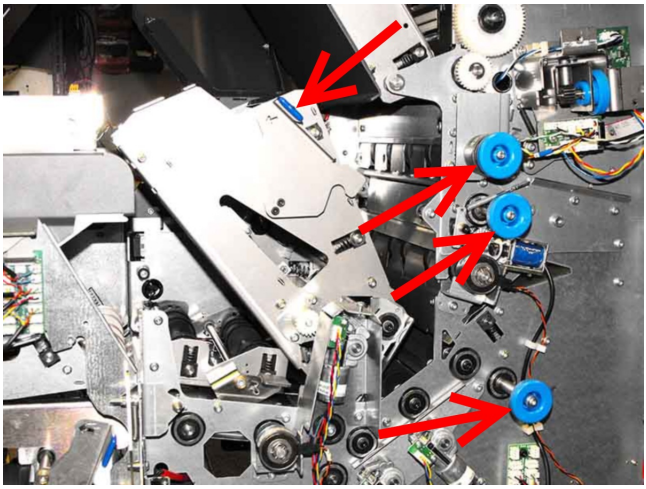
**Tower Folder**

**1.** Open the side cover on the flex folder.

**Base Unit**

Using the blue tab, open the folder assembly to access the jammed paper.
If the paper is not fully visible, turn the blue knobs to wind it into view.

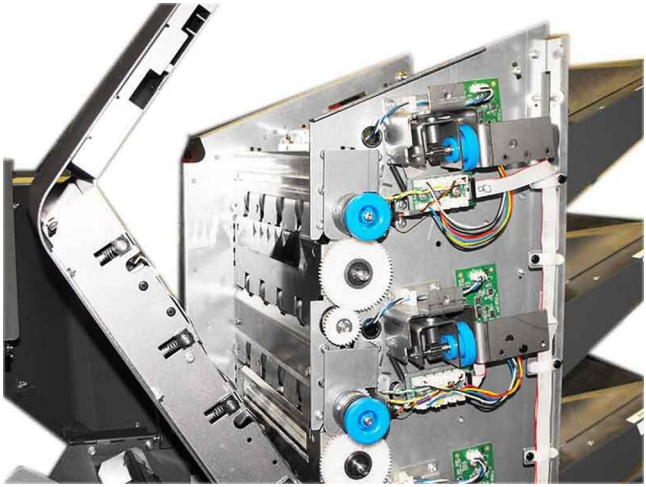
**When closing the folder assembly, ensure it is fully latched on both sides**.



**Tower Unit**

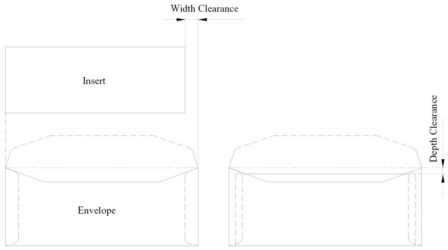
Using the release handle, open the top cover to access the jammed paper.

If the paper is not fully visible, turn the blue knobs to wind it into view.



# 10 Technical Specification

## Inserter head

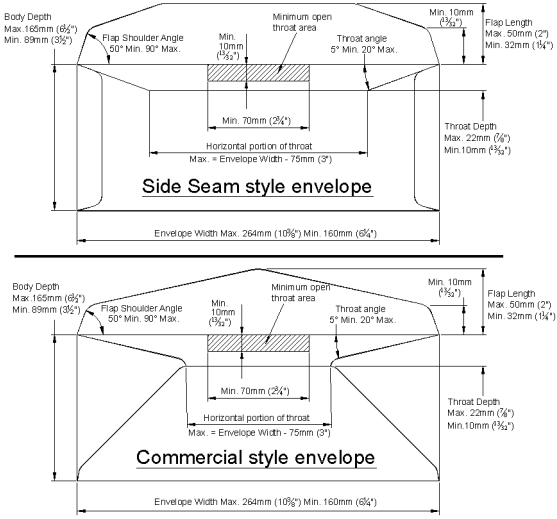
| Parameters | |
|---|---|
| **Pack thickness** | Maximum pack thickness is defined as the internal dimension of a rigid opening that a filled envelope will fall through under its own weight.<br><br>All envelope sizes: up to 6mm (¼”) |
| **Pack clearance** | The minimum clearances required between the inserts and envelopes are dependent on insert pack thickness.<br><br>Clearance is the total clearance and is defined as the difference between the largest overall dimensions of the pack and the internal dimensions of the envelope (see below). The required clearances are summarised as follows:<br><br>Pack <3mm: Depth 6mm (¼”) Width 16mm (5/8”)<br>Pack >3mm <6mm: Depth 12mm (½”) Width 19mm (¾”)<br><br>  |
| **Cycling speed** | **7102 Series:** Up to 4500 envelopes per hour (based on 1 x letter folded sheet into a #10 envelope).<br><br>**7102XT Series:** Up to 5500 envelopes per hour (based on 1 x letter folded sheet into a #10 envelope).<br><br>Speeds for other conditions available on request. |
| **Monthly volume** | **7102 Series:** Up to 150,000 filled envelopes per month.<br>**7102XT Series:** Up to 180,000 filled envelopes per month. |
| | |

English

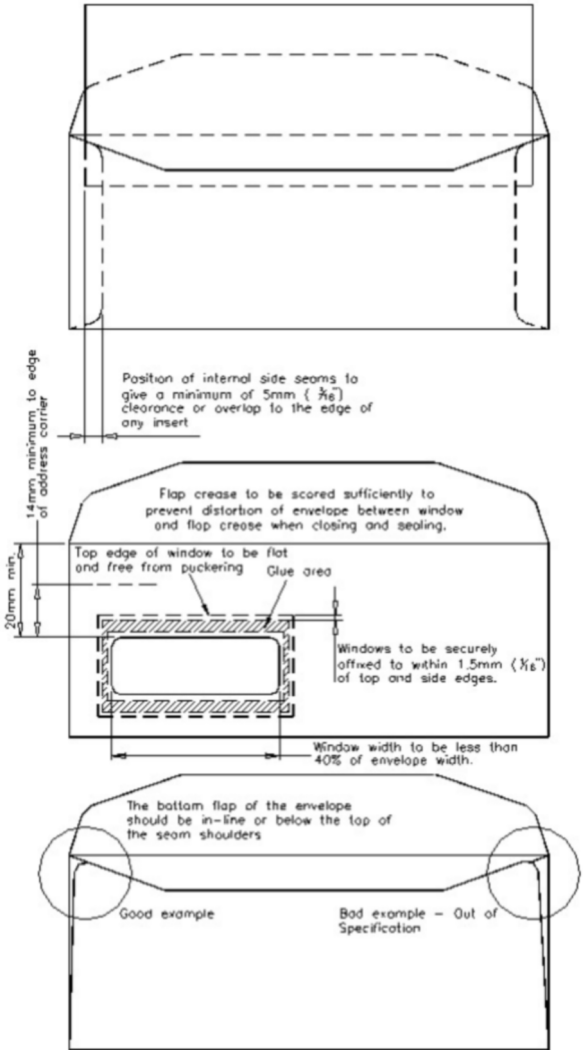
| | |
|---|---|
| **Envelope weight** | Minimum: 70gsm (18lbs bond)<br>Maximum: 100gsm (28lbs bond) |
| **General envelope requirements** | • Envelope to be good quality machine-fill type. Dimensions and quality to be consistent across manufactured batches.<br>• Side seams must be securely glued to the top of the seam.<br>• Flap crease must be pre-scored to enable the envelope flap to open flat.<br>• No glue seepage must be evident on interior or exterior of envelope.<br>• Windows to be securely affixed to within 1.5mm (1/16”) of top and side edges. Top edge to be flat and free from puckering. |
| **Output convey -er capacity)** | Up to 500 filled envelopes (assumes 1 document inserted) |

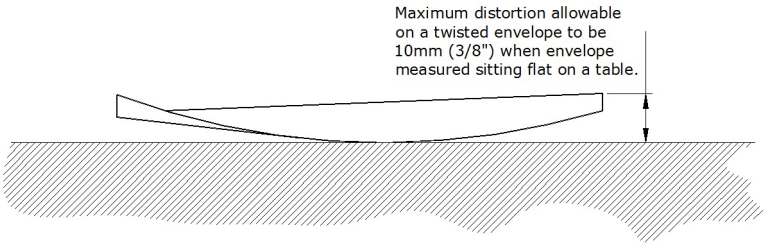


## Envelope details




**Note: Widths from 160mm to 182mm require the Narrow Envelope Kit A0021168. With the Narrow Envelope Kit fitted, the width specification is 160mm to 264mm.**


Position of internal side seams to give a minimum of 5mm ( 3/16" ) clearance or overlap to the edge of any insert
14mm minimum to edge of address corner
Flap crease to be scored sufficiently to prevent distortion of envelope between window and flap crease when closing and sealing.
Top edge of window to be flat and free from puckering
Glue area
20mm min.
Windows to be securely affixed to within 1.5mm ( 1/16" ) of top and side edges.
Window width to be less than 40% of envelope width.
The bottom flap of the envelope should be in-line or below the top of the seam shoulders
Good example
Bad example – Out of Specification

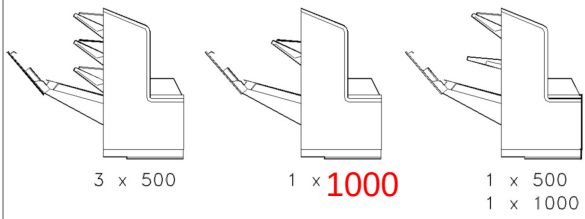
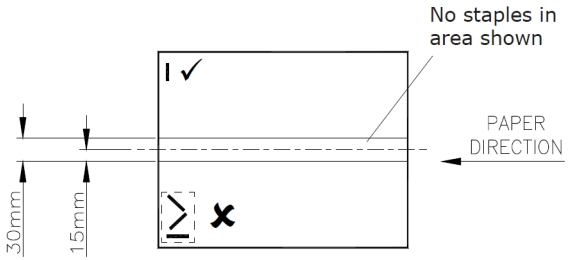



| | |
|---|---|
| **Envelope sealing fluid** | Built-in wetter tank, automatically pump-fed by 10-litre wetter container located in stand. Optional low-level float switch available. |



## Tower Folder

| **Parameters** | |
|---|---|
| **Paper Size** | Minimum width: 140mm (5½")<br>Maximum width: 228mm (9")<br>Minimum length: 140mm (5½")<br>Maximum length: 406mm (16")<br>**Note**: The maximum suggested width difference between inserts is 32mm (1¼"): this may be increased subject to test. If this difference is exceeded, the insertion fingers will not cover the edges of the narrow insert and may cause insertion problems. Sandwiching a narrow insert between two wider ones may resolve this. |
| **Paper weight** | Minimum 60gsm (16lbs bond)<br>Maximum 120gsm (32lbs bond) for folded documents<br>Maximum 4mm thick for unfolded inserts (subject to test) |

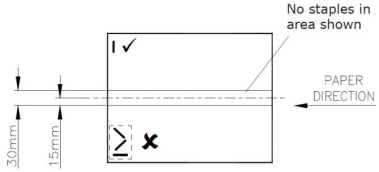
| | |
|---|---|
| **Folding capacity** | C, Z or V-fold: 8 sheets 80gsm (20lbs bond)*<br>Double-forward fold: 4 sheets 80gsm (20lbs bond)*<br>* Up to 2 x 8 split sets into one envelope dependent upon pack thickness. |
| **Fold lengths** | Fold Plate 1: 229mm Max, 48mm Min.<br>Fold Plate 2: 229mm Max, 50mm Min.<br>Fold Plate 3: 202mm Max, 50mm Min. |
| **Hopper capacity** | Tower Folder can be ordered in 3 configurations as follows:<br>3 x 500 sheets of 80gsm (20lbs bond)<br>1 x 1000 sheets of 80gsm (20lbs bond)<br>1 x 500 + 1 x 1000 sheets of 80gsm (20lbs bond)<br>  |
| **Daily mail** | Up to 8 sheets of 80gsm (20lbs bond) for C, Z or V fold, up to 4 sheets of 80gsm (20lbs bond) for double forward fold. May be stapled or not. Max. thickness of staple 3mm. Allowable staple positions are shown below.<br>  |

## Insert Feeder

| Parameter | |
|---|---|
| **Insert Sizes(Single hopper)** | Minimum width: 140mm (5½”)*<br>Maximum width: 241mm (9½”)<br>Minimum length: 76mm (3”) for module 1<br>89mm (3½”) for following modules<br>Maximum length: 152mm (6”)<br>*For individual items. Min. pack width: 210mm (8¼”) |
| **Paper weight** | Minimum 60gsm (16lbs bond) min.<br>Maximum 4mm (5/32”) thickness |
| **Hopper capacity** | Up to 300 BREs or 150 2mm booklets<br>**Note**: Quantities shown above are maxima. Depending<br>upon other conditions, actual quantities may be lower<br>than those shown. |
| **Insert Sizes(Tower hopper)** | Minimum width: 140mm (5½”)*<br>Maximum width: 241mm (9½”)<br>Minimum length: 76mm (3”) for module 1<br>89mm (3½”) for following modules<br>Maximum length: 152mm (6”)<br>*For individual items. Min. pack width: 210mm (8¼”) |
| **Paper weight** | Minimum 60gsm (16lbs bond) min.<br>Maximum 2mm (5/64”) thickness (top tray)<br>Maximum 4mm (5/32”) thickness (lower tray) |
| **Hopper capacity** | Up to 200 BREs or 100 2mm booklets<br>**Note**: Quantities shown above are maxima. Depending<br>upon other conditions, actual quantities may be lower<br>than those shown. |

| | |
|---|---|
| **Requirements** | Enclosures must be flexible enough to suit path constraints.<br>Some enclosures may require special tyres. |

## Feeder Folder

| **Parameters** | |
|---|---|
| **Depth:** | 140mm (51/2”) min. (89mm (3½”) for unfolded inserts)<br>406mm (16”) max. (139mm (5½”) for unfolded inserts) |
| **Width:** | 140mm (51/2”) min. (Widths below 168mm (6.6”) require narrow finger kit A3348A).<br>229mm (9”) max. |
| **Thickness:** | 60gsm (16lbs bond) min.<br>70gsm (18lbs bond) min. for OMR/Barcode paper<br>120gsm (32lbs bond) max. |
| **Depth of output doc:** | 89mm (31/2”) min.<br>152mm (6”) max. |
| **Hopper capacity:** | Up to 500 sheets of 80gsm (20lbs bond) |
| **Daily Post:** | Up to 3 sheets (C or Z fold) or 5 sheets (V fold) of 80gsm (20lbs bond). May be stapled or not, but staples on ‘Z’ fold only. Max. thickness of staple 2mm. Allowable staple positions shown below. **Note**: all daily post forms must be the same length.<br>**Note**: Daily Post is not available as an option if a CIS reader is fitted.<br>  |

# Mechanical & Electrical

**Noise level:**

<73dbA (following ISO 11202).

**Electrical:**

| | 230VAC | 115VAC |
|---|---|---|
| Frequency | 50Hz | 60Hz |
| Input Current | Head: 1A | 2A |
| | Single Feeder: 0.5A | 1A |
| | Twin Feeder: 0.5A | 1A |
| | CIS Feeder: 0.5A | 1A |
| | Tower Folder: 1A | 2A |



**Power Requirement and Voltage Tolerance:**

230V / 50 Hz (voltage tolerance +10%/10%)
115V / 50/60 Hz (voltage tolerance +6%/10%)

**Operating Temperature:**

10 - 40 deg C (50 - 104 deg F)

**Operating humidity:**

30 - 80% RH

**Display Properties:**

| | |
|---|---|
| Screen Size: | 15” |
| Screen Resolution: | 1024 x 768 pixels |
| Screen Technology: | Full Colour Touch Screen |

**Dimensions:**

| **Inserter Head** | |
|---|---|
| Length: | 720mm (28.3”) |
| Width: | 475mm (18.7”) |

| | |
|---|---|
| Height: | 600mm (23.6”) |
| Weight: | 56Kg (123lbs) |

| **Tower Folder** | |
|---|---|
| Length: | 490mm (19.3”) |
| Width: | 475mm (18.7”) |
| Height: | 915mm (36.0”) |
| Weight: | 75Kg (165lbs) |

| **Feeder Folder** | |
|---|---|
| Length: | 408mm (16.0”) |
| Width: | 475mm (18.7”) |
| Height: | 710mm (27.9”) |
| Weight: | 43Kg (95lbs) |

| **Reading Feeder** | |
|---|---|
| Length: | 408mm (16.0”) |
| Width: | 475mm (18.7”) |
| Height: | 550mm (21.6”) |
| Weight: | 25Kg (55lbs) |

| **Single Feeder** | |
|---|---|
| Length: | 408mm (16.0”) |
| Width: | 475mm (18.7”) |
| Height: | 520mm (20.4”) |
| Weight: | 25Kg (55lbs) |

| **Twin Feeder** | |
|---|---|
| Length: | 408mm (16.0”) |

| | |
|---|---|
| Width: | 475mm (18.7”) |
| Height: | 700mm (27.6”) |
| Weight: | 25Kg (55lbs) |

| **Processing Speed** | |
|---|---|
| 7102 Series: | 4500 filled envelopes per hour. |
| 7102XT Series: | 5500 filled envelopes per hour. |

**Ambient light:**

Although the machine may operate in sunlight, it is not designed for use in direct sunlight, or where sunlight is exposed to the machine through windows or skylights. The light-sensitive sensors can be affected in these conditions. It is therefore recommended to:

1. Locate the machine out of direct sunlight
2. Protect the machine from direct sunlight using blinds or similar blocking devices.

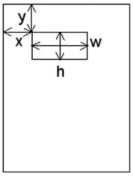
If the machine can only be located where it may be exposed to direct sunlight, then please contact Technical Support department, who may be able to advise on the use of blocking material on the inside of the Perspex cover where necessary.



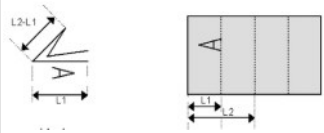
1. All stationery should be allowed to acclimatise near the machine for at least 24 hours before use to prevent rapid absorption of moisture in the material, or condensation forming on the machine. Failure to acclimatise the material may cause pre-gumming of envelopes or otherwise impair machine performance.
2. The machine will function with humidity levels lower than 30% RH, but high levels of static may be generated, impairing machine performance.
3. The machine will function with humidity levels higher than 80% RH, but moisture absorption into the material may impair machine performance.
4. Condensation must not be present under any circumstances.
5. The machine will function at temperature levels above 28 deg C (82 deg F) and below 18 deg C (64 deg F). However, temperature levels outside these limits may impair the machine performance.
6. Material processed directly from laser printers may have high levels of static causing material to stick together. If double feeding occurs, then Hi-Grip separators may be required - contact IPSS department.

# 11 Glossary of terms

## Glossary of terms

| Term | Description |
|---|---|
| Address carrier | The address carrier is the document that carries the address of the person for who the mail set is meant. The address carrier can consist of one or more sheets, from which at least the first sheet must contain the address. The address must remain visible while enclosures are added and the document set is folded. The fold type and selected envelope must ensure that the address is visible behind the window in the envelope. For personalized mailings there is always an address carrier present as long as envelope printing is not supported. Normally there is one address carrier. |
| Address position |  <br>Position of the address on the address carrier, measured from the upper left corner. The address position consists of a horizontal x coordinate, a vertical y coordinate, a horizontal width w and a vertical height h. |
| Automatic | The feature of an inserting system to automatically determine its job settings by measuring the sizes of documents and envelope. From all feeders that are loaded one sheet will be taken. Based on the maximum document length (which is also the length of the document set) and the length of the envelope the fold type is determined. |

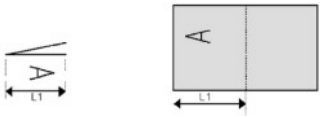
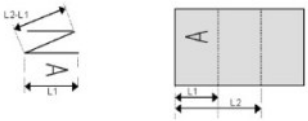
| | |
|---|---|
| Automatic job | A job that is created with the Automatic job functionality. |
| Barcode Reading (BCR) | Barcode Reading is intended for reading and interpreting printed barcodes. The codes give information to the inserting system about how to build-up and handle a set. |
| Business Reply Envelope (BRE) | Envelope included in outgoing mail sets for addressee response purposes. |
| Cascading | See Feeder linking. |
| C-fold | See Letter fold. |
| Daily Mail | Capability of an inserting system to manually insert mail sets one by one into the system, which are then inserted into an envelope. Optionally, depending on settings, additional enclosures can be added and the mail set can be folded. This function is intended for small amounts of mail that each can have a different build-up. |
| Deskew | A system of straightening a skewed document or enclosure by driving it into a set of drive rollers that have been briefly stopped. This removes the skew, and after a set period of time, the rollers restart. Deskew slows the machine down and can be disabled or adjusted for amount of deskew for forms that are not prone to skewing. |
| Document | A document is one of the components of a mail set. A document can consist of one or more sheets. Documents can be divided into address carriers and enclosures. For personalized mailings there is always one address carrier and an optional number of enclosures. |

| | |
|---|---|
| Document set | The document set is the physical collection of address carrier and enclosure(s) that is under production in the inserting system. The document set is completed during production and is to be inserted into the envelope. The number of enclosures can range from 0 to the limit imposed by the number of available feeders, whilst observing the overall pack thickness. Once the document set has been inserted into an envelope it is called mail set. |
| Double Document Detection | Double Document Detection is the sensor that measures the thickness of a sheet to check if the inserting system does not accidentally take more sheets than intended. DD sensors exist on feeders (double sheet detection). Currently DD detection on Neopost inserting systems perform relative measurements, which means that they need a cycle to 'learn' the thickness of a sheet. Also the length of the document is measured so partly overlapping sheets will be detected. |
| Double parallel fold | The double parallel fold is a type of fold where the document is first folded halfway and the resulting folded set is again folded halfway. This fold is illustrated in the picture below. The position of both folds is adjustable.   |
| Envelope | The envelope is the packaging of a mail set. Window envelopes are envelopes that have a transparent section through which the address on the address carrier can be read. Besides the normal top closing window envelopes there are also bottom closing envelopes. |
| Face down | Situation in which the front of a sheet is facing downwards when placed in a document feeder. |

| | |
|---|---|
| Face down leading | Situation in which the front of a sheet is facing downwards and the top of the sheet is closest to the separation unit in a document feeder, ie. the front end of the tray |
| Face down trailing | Situation in which the front of a sheet is facing downwards and the bottom of the sheet is closest to the separation unit in a document feeder, ie. the front end of the tray. |
| Face up | Situation in which the front of a sheet is facing upwards when placed in a document feeder. |
| Face up leading | Situation in which the front of a sheet is facing upwards and the top of the sheet is closest to the separation unit in a document feeder, ie. the front end of the tray. |
| Face up trailing | Situation in which the front of a sheet is facing upwards and the bottom of the sheet is closest to the separation unit in a document feeder, ie. the front end of the tray. |
| Feeder | A feeder is a module for the input of documents to the inserting system. The feeder separates documents sheet by sheet from the stack of documents in the feeder tray. |
| Feeder linking (Cascading) | The ability to load two feeders with the same document type where the inserting system automatically switches to a second feeder when the first feeder is empty and vice versa. In the mean time the first feeder can be refilled, so the inserting system can keep running without having to stop for refilling the feeders. |
| Feeder tray | Part of the feeder that contains the stack of documents or envelopes. |
| Flexcode OMR | An OMR code for which the meaning of the OMR marks can be programmed in a dedicated way for a specific customer. This is normally used to support the OMR codes from other suppliers |

| | |
|---|---|
| FlexFeed | The flexFeed is the feeding part of the system. |
| High Capacity Feeder | Feeder that has a capacity up to 1000 sheets (on a Tower unit). |
| High Capacity Vertical Stacker | Optional stacker that is mounted on the exit of the system, to stack flled envelopes. |
| Insert | • To insert is the action of inserting a document set into an envelope.<br>• For native English speaking customers an insert is also a short document, not to be folded, usually an enclosure. |
| Inserter | An inserter is the module where the document set is inserted into the envelope, the envelope is closed and if necessary sealed. |
| Inserting system | The system of all the modules that cooperate to perform the inserting function (accumulate document set, fold and insert) and have a single point of control. |
| | |
| Job | A job is an actually produced collection of mail sets based on a certain job definition at a certain point in time for a specific purpose. It consists of:<br>• The job definition used for the production<br>• Information about the batch size |
| Job counter | The counter that registers the number of mail sets that is produced as part of a specific job. |
| Letter fold (also known as C-fold) | Fold type in which a document set is folded twice in which the folded flaps are on top of each other. This fold is illustrated below. The position of both folds is adjustable. |
| Linking | See Cascade |
| | |
| Multiples | The feature of an inserting system in which more than one sheet is taken from a feeder. |

| | |
|---|---|
| OMR | Optical Mark Recognition (see further table entry). |
| OMR code definition | Standard 1-track OMR code definition. Specifies the amount of reading marks used and the functionality linked to each of them (how each should be interpreted). A definition is a licenced option. |
| Operator | The person operating an inserting system. |
| Optical Mark Recognition (OMR) | Optical Mark Recognition is intended for reading and interpreting printed codes. These codes are one or more black marks which are read from a document. These marks give information to the inserting system about how to build-up and handle a set. |
| Output Conveyor | Fitted at the output for filled envelopes to be ejected onto. Higher capacity alternative to a receiving tray. 2 lengths are available. |
| Pod | The feed hopper unit fitted to a Tower. A Tower is available with either 1 or 2 pods, each one consisting of either 2 x 500-sheet trays or 1 x 1000-sheet tray. |
| Reading error | Condition in which the system could not reliably read or interpret the OMR reading marks or barcode from a sheet. |
| Reading marks | Marks added to documents containing finishing instructions that can be identified by an reading head and interpreted according to the used OMR code definition. |
| Receiving tray | Fitted at the output for filled envelopes to be ejected into. Basic alternative to an Output Conveyor. |
| Remote diagnostics | The feature that makes it is possible to analyze a problem on an inserting system from a remote location. |
| Service engineer | Technical engineer whose task it is to resolve problems with systems in the field. Besides dealing with problems, service engineers are also responsible for preventive maintenance. |

| | |
|---|---|
| Single fold | A single fold implies the document set is folded once. The fold position is adjustable. This fold is illustrated below:<br>  |
| Stop counter | Counter which sets the amount of envelopes to be filled. After filling this amount of envelopes the system will stop. |
| Supervisor | Person who is responsible for the technical state of the system. Normally a supervisor has access to programming functions, which are restricted for standard users. |
| Test run | A test run is intended to validate the settings of the inserting system:<br>• Inspect and adjust the stop position of the envelope.<br>• Check the fold settings for one set.<br>• Check whether the address is correctly positioned behind the envelope window. |
| Tray (or hopper) | Contains a stack of paper for a printer or inserter. This paper is supplied to the system for further processing. |
| Vertical transport | The vertical transport section between hoppers and folder/ collator below . |
| Z-fold (also known as zigzag fold) | A Z-fold means that a document is folded twice in such a way that each folded flap is on a different size of the folded document, resulting in a Z-shape. This fold is illustrated below.<br>The position of both folds is adjustable.<br>  |