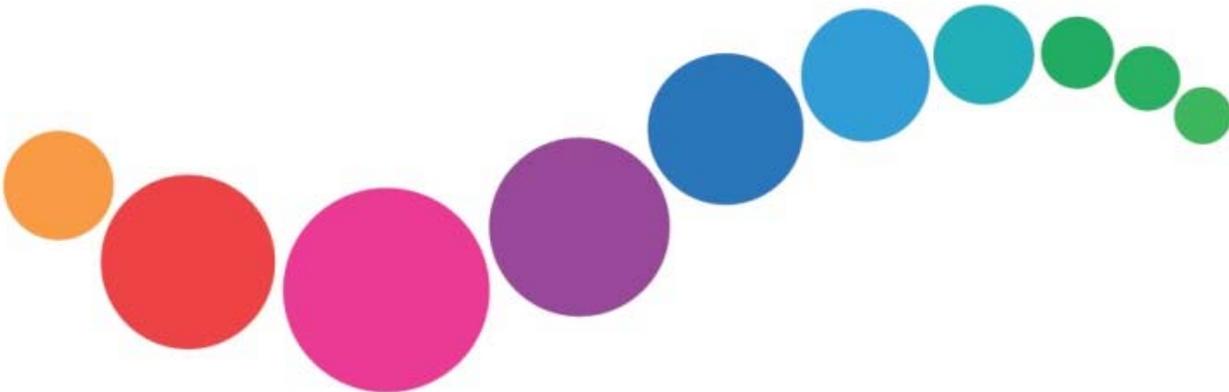


OKI Digital Envelope Support Guide



Ver2.0



Overview of Products / Features



pro900DP Envelope Press

The OKI pro900DP envelope printer is a CMYK digital envelope printer capable of producing full color images at 600 or 1200 dpi.

The solution can produce up to 50, #10 envelopes per Minute, or 36 letter pages per minute, in full color. This solution can also print on a wide variety of envelope, paper and label substrates including window envelopes, printing and is capable of bleed printing off the left, right and bottom edges of the envelope.

The pro900DP can print sizes from as small as 3"x5" cards and can print sheets up to 12" x 18", utilizing the high capacity feeder. The system includes 2 media trays each holding a maximum of 530 sheets, up to 12" x 18".

The pro900DP comes standard with an EFI Fiery 8e Embedded RIP which gives customers the ability to adjust color to better match Pantone PMS colors and in addition, helps customers produce basic variable data applications such as addressing letters, envelopes or postcards to produce mail ready documents in a single pass, consistently, on one device.

- **Embedded EFI Fiery® System 8e controller with Smart RIP®**
- **HD Color Printing for breathtaking output on wide variety of envelope stocks**
- **1200 x 1200 dpi**
- **Prints up to 50 envelopes per minute**
- **Handles media weights from: 307 gsm from all paper drawers and up to 320 gsm from envelope feeder**
- **Prints from 3" x 5" to 12" x 18" sizes (from envelope feeder)**
- **Prints up to 12"x18" media from drawers. Comes standard with 2 paper drawers and 1 storage compartment**
- **2 Year On Site Warranty**



C931DP / C941DP / C942DP Envelope Press

The OKI C931/ C941/C942 DP envelope printers are a CMYK digital envelope printer capable of producing full color images at 1200 dpi resolution.

The solution can produce up to 500 #10 envelopes in less than 12 minutes or 50 letter –size pages per minute, in full color. This solution can also print on a wide variety of envelope, paper and label substrates,

The C931/ C941/C942 DP can print sizes from as small as A2 envelopes and as large as 10x13" catalog envelopes utilizing the high capacity feeder. The system includes 2 media trays each holding a maximum of 530 sheets up to 13" x 19".

DP models can be paired with an optional RIP server to achieve consistency and automation in light production environments. The C941DP provides the benefits of white and clear toner printing in a flexible affordable easy to use 5-station device.

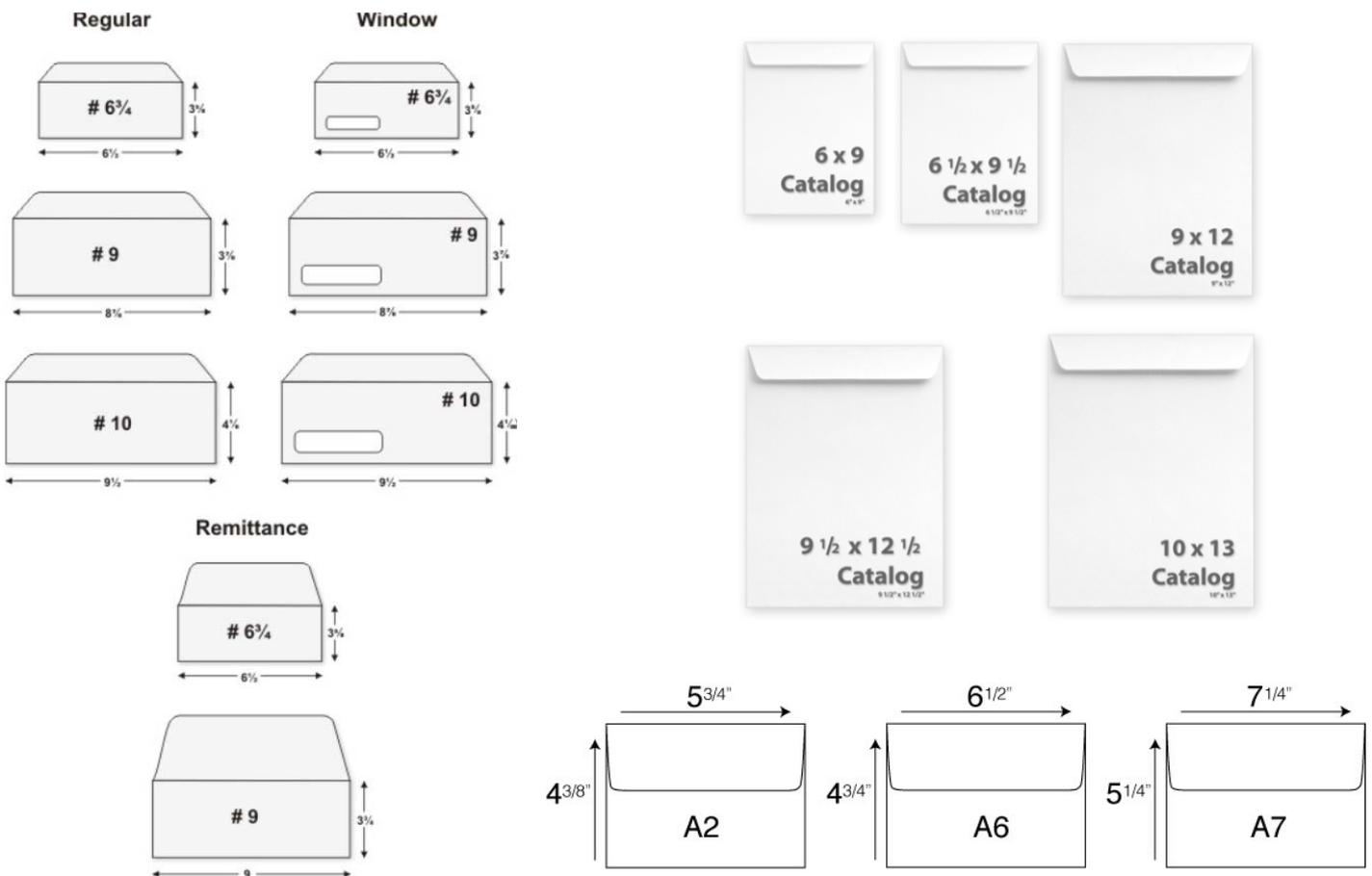
- **Fiery® C9 Server (Optional)**
- **First in its class to offer "White Toner & Clear Toner" (C941DP)**
- **HD Color Printing for breathtaking output on envelopes and on a wide variety of paper stocks**
- **1200 x 1200 dpi**
- **Prints up to 500 envelopes in under 12 minutes**
- **Prints up to 50 ppm color and mono (letter-size)**
- **Handles media weights from: 320 gsm (from all paper drawers) and up to 360 gsm from envelope feeder**
- **Prints from A2 envelopes to 10" x 13" sizes (from envelope feeder)**
- **Prints 8 ½" x 11" up to 13"x18" media from drawers. Comes standard with 2 paper drawers and 1 storage compartment (cabinet)**
- **1 Year On Site Warranty**

Envelopes – Selecting the right media

The media selected for a specific print job plays an important role in delivering high quality results. In addition to the general quality of the media (texture, weight, composition), the physical design and construction of an envelope must be taken into consideration in striving to achieve optimum print quality.

Use window envelopes that are designed for a laser printing and machine feeding. Avoid envelopes with windows that appear wavy or the window is not tightly glued to the cut-out on the face of the envelope. Also inspect for rough edges along the envelope's flap which may hook onto the window of the envelope being fed, resulting in a double feeds and jams.

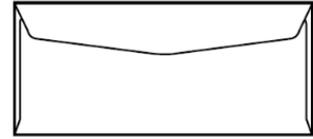
In some cases, the envelope's composition and construction may limit the type of graphic artwork and/or the positioning of the content for that envelope style, and some envelopes should just be avoided altogether. The most commonly used envelope styles and sizes, in US/Canada are shown below.



Envelope Styles and Considerations

Side Seams

Generally, the preferred envelope design for laser-type printing. Provides a large surface area uninterrupted with folds and seams.



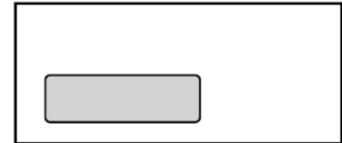
Diagonal Seams

Available in a wide variety of designs and fold patterns. Economical.



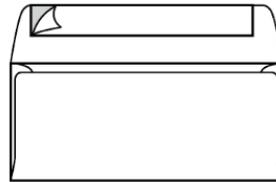
Window

Use only window envelopes that can handle the fusing process of a laser printer.



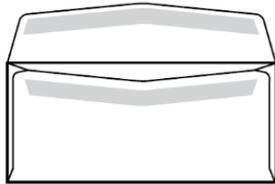
Peal and Stick Sealing

Often includes premium quality media and good results.



2-sided Adhesive Pressure Seal

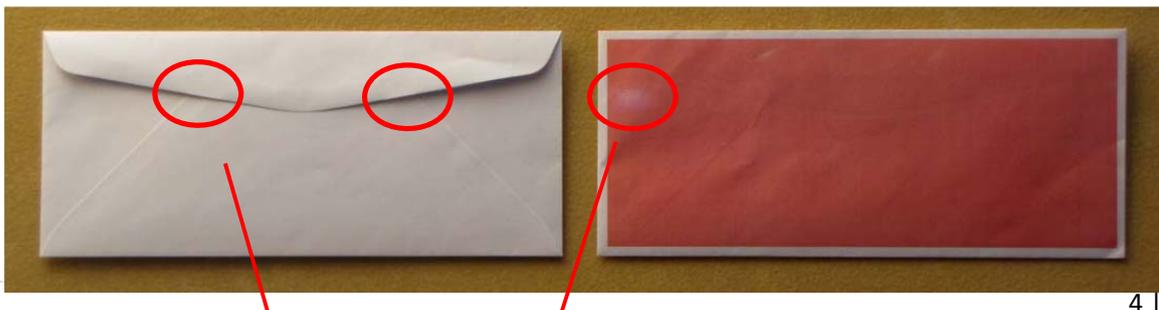
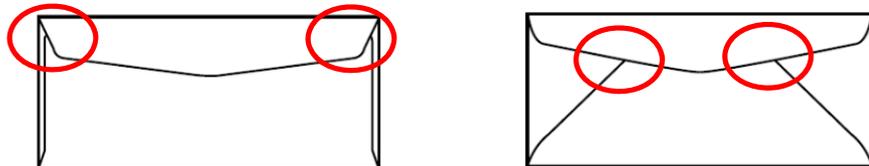
DO NOT USE



Envelope Design Considerations

When selecting envelopes, be aware that the physical design and quality of the envelope may impose limitations on print quality and/or handling. Envelopes can be a challenge because of the multiple surfaces passing through the printer. For example, most envelopes require the printer to transfer toner onto a surface that has 2, 3 and 4 layers of thickness.

A typical envelope will have 4 layers of media in multiple locations when it's flaps are closed. In the illustration below, the red circles indicate the location where 4 layers of media overlap on two different envelop designs. Generally, the printer is capable of transferring toner on thick media. However, testing has found that the location of the overlapping layers may create pressure points in one area which yield a void of pressure in other areas of the envelope. This is illustrated in below.

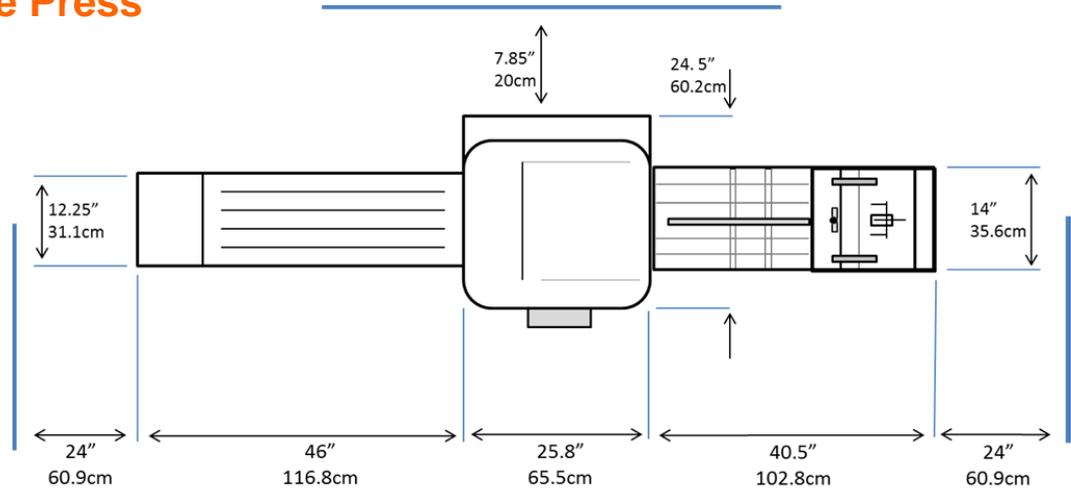


Pressure points and voids in printing caused by an air gap

Knowing ahead of time the strengths of each envelope can be helpful in matching a job to an envelope or knowing when to change the content and/or the layout of a print job. The images above illustrate that the pressure points of a particular envelope design may interfere with the printer's ability to maintain uniform contact between the printer's image drums and the surface of the envelope. Keep in mind, that an envelope design that has a weakness in one area may be acceptable for jobs that do not use that area (this is especially true for large envelopes). Testing and experience will help to quickly identify the best envelope for a given job or layout. Some jobs may require you to use a specific envelope in order to reliably place content in specific locations or to achieve consistent quality.

Assembly and Set-up Tips

pro900DP Envelope Press (floor planning)



Packaged Size (complete system on skid) 55 in. x 62 in. x 35 in. (w x d x h)

Packaged Weight (complete system on skid) 530 lb. (240.4 kg)

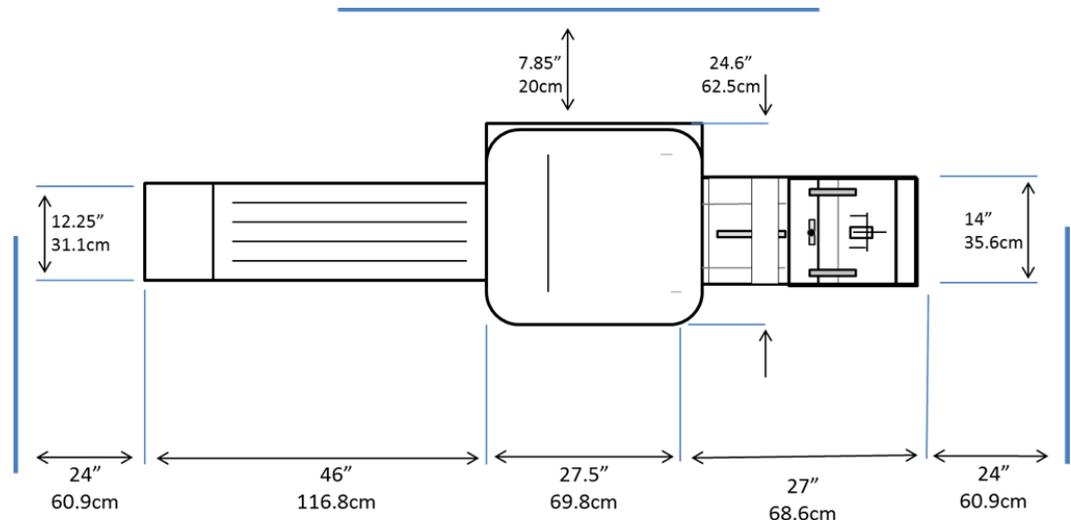
Current Ratings (110V)	Printer	Feeder	Conveyor
	110-127V 50/60Hz 10A	115V 50/60Hz 3A	115V 50/60Hz 1A

AC Cord Rating (US Type) 15A non-shielded (for printer) All AC cords included with system

Outlet Requirements (110V) 3 - 3prong receptacles or 20A Commercial Power Strip – to be supplied by site

C931/C941/C942 DP Envelope Press

(floor planning)



Packaged Size (complete system on skid) 62 in. x 58 in. x 43 in. (w x d x h)

Packaged Weight (complete system on skid) 613 lb. (228.8 kg)

Current Ratings (110V)	Printer	Feeder	Conveyor
	110-127V 50/60Hz xA	115V 50/60Hz 3A	115V 50/60Hz 1A

AC Cord Rating (US Type) 15A non-shielded (for printer) All AC cords included with system

Outlet Requirements (110V) 3 - 3prong receptacles or 20A Commercial Power Strip – to be supplied by site

Floor / levelling requirements

Although there are leveling feet on the feeders and conveyors, an attempt should be made to always place the system on a level surface. The ideal orientation of the feeder body and conveyor are level, front to back.

Keeping each component (conveyor, feeder and printer) as level as possible is the goal.

Feeder / Conveyor assembly

The pro900DP feeder and conveyor come with legs that have to be assembled. The easiest way to assemble the feeder is to put together the legs and base plate, turn the feeder on it's side, and then attach the legs. The easiest way to assemble the conveyor is to turn it upside down and attach the legs.

The C931/941DP/C942DP feeder and conveyor are easier to assemble as they come with a stand and column as shown below. For these, it's easier to assemble the footer/column and mounting plate and then turn the feeder and conveyor upside down, attach the assembled base to the feeder and conveyor and then finish assembling the feeder (stacker arms, wedge assembly).

Preparing printers

C931/C941/C942 DP Envelope Press

Preparing the printer for Conveyor

The rear tray can either be removed from the printer, or the tray can be modified so that it appears to be in the open position at all times. We recommend just removing the rear door as it eliminates any potential issues with curled media not exiting the printer.

Preparing the printer for Feeder

The input side fold-down tray must first be removed from the printer. Simply unclip the side guide of the fold-down tray, from the printer on the rear side of the tray, and lift this assembly out of the printer.

Printer with Tray removed ...



Remove the separator pad to allow media and envelopes to be more easily fed by the external feeder. First open up the input assembly and locate the top feed roller and arm. Then locate the lower center paper separator pad and remove it. This will not be needed for envelopes and media fed from the feeder.



Next, install the side arm spacer to hold the lift tray in position. The spacer (either metal or plastic) has double sided tape, which helps it stay in place on the small black plastic 'shelf' on the right side of the top feed arm. Add the spacer as shown. This will hold the top roller arm all the way up when the input tray is in the closed position.



The final step is to install the wedge/spring pad assembly included with the feeder installation kit.

pro900DP Envelope Press

Preparing the printer for Conveyor

The rear tray is removed from the printer, just like the C931/941DP. Once the rear face up catch tray is removed from the printer the conveyor just rolls up to the end and when media drops out of the printer, it drops onto the conveyor.

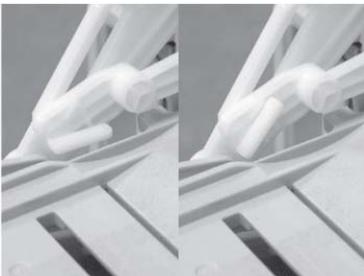
Preparing the printer for Feeder

The pro900DP feeder attaches to the front end of the printer and uses the paper input sensor to tell the printer paper is always there, and to reset this when it's time for paper to be reloaded. It also clips into the chassis of the printer, and requires a reflector (for the sheet sensor) to be installed. The Multi-purpose tray assembly has to be removed and requires more steps to install, than the roll-up design of the C931/941DP. This can be accomplished as follows.

Removing the bypass/Multi-purpose tray:

1. Locate the two white plastic support arms, unlock and rotate out of the way.
2. Slide the outside arms slightly up and away to disengage from printer.

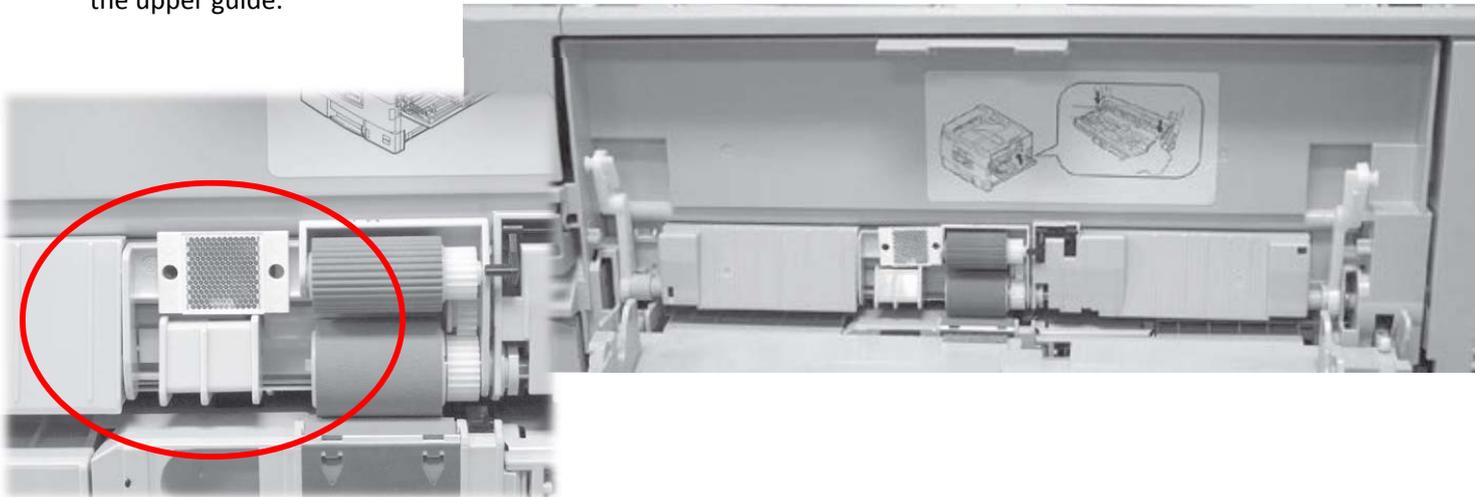
Support arms



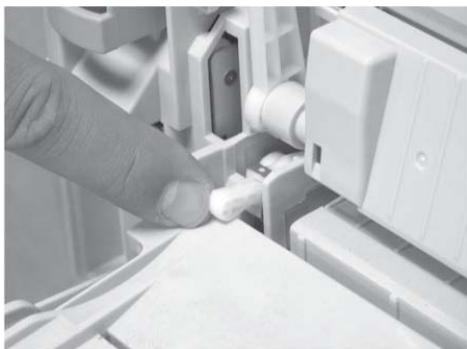
Outside arms



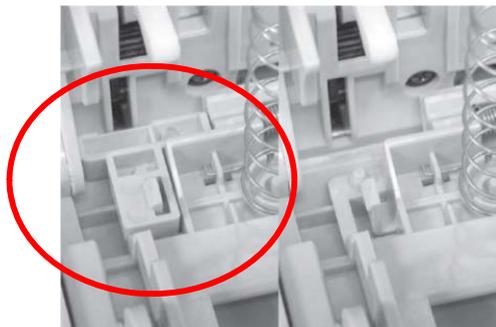
3. Flip open the top roller assembly and install reflector by peeling protective tape and adhering to area just left of the upper guide.



4. Locate the small white lift arm on each side of the bypass tray. Push these back to allow the tray to release upwards.

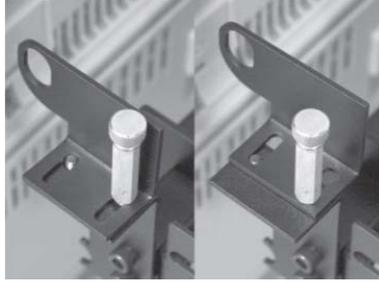


5. Locate the T-lock under the tray, remove it so that the tray can be moved and unlocked from printer chassis.
6. Pull the release lever on the left side to partially open the tray once the T-lock is removed to remove the tray.



Attaching feeder to printer:

1. On the end of the feeder discharge, locate the mounting brackets, reverse them from the shipping position, so that they are open, loose and facing the printer.



2. Loosen the two hex nuts on the side of the feeder where the discharge frame attaches to the feeder. This will allow the discharge frame to move and be easily aligned with the printer.
3. Align mounting brackets with the C opening facing the mounting pegs on the printer. Once this is connected, lock the top mounting screws on the bracket, retighten the discharge side frame, and clip the printer's top roller assembly back into the side frame of the feeder mounting brackets.

Mounting Bracket



Ensure that the reflector is centered above the feeder's sheet sensor, and that the solenoid switch is centered over (and not hung up on) the paper input sensor on the printer.

Trouble-free Feeding

On a friction feed system, there are two areas where the set-up details, can alleviate a wide variety of envelope feed issues. The wedge at the stacker (in the back) is one area, and the other is the gate adjustment (what some call the 'gap' adjustment). The tendency is to focus on the gate adjustment, but many times the more critical adjustment for feed consistency is actually at the wedge (this is particularly true for the C931/C941/C942 DP systems).

- 1) The 'gap' of the separator should be set so that the top (brown) gate grips the center of the envelope firmly. During feeding with pressure and the weight of the stack the (tan) belts can actually be slightly pushed down, so this step is key !

To find the ideal position for the initial set-up, set the gate so that its bottom has a 0.08 or 0.12 inch (2 or 3mm) overlap with the top surface of the feeder belts as shows, and then start adjustments.

Adjustment of the feeder itself before its installation to the printer Load about 100 envelopes that are actually to be used, and make adjustment by feeding them.

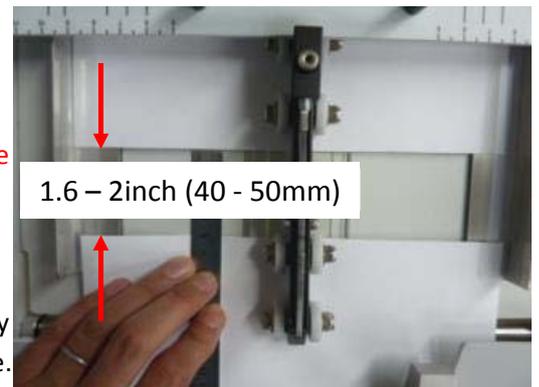
The preferred gap between envelopes on the discharge belt is about 1.6 to 2 inch (40 to 50 mm).



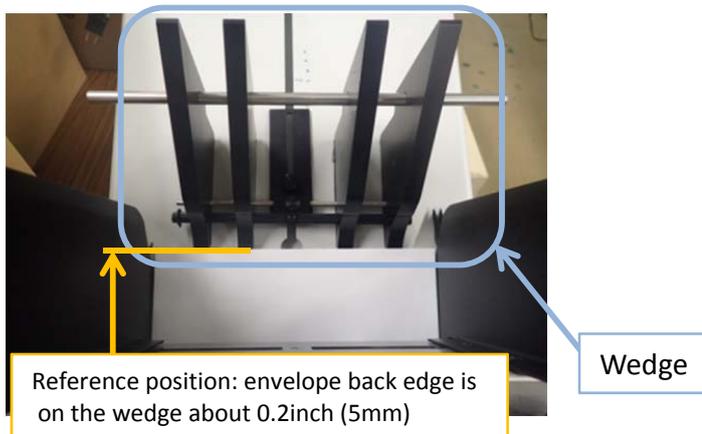
Adjustments for jams or double feed in the separation area

Jams: Jams tend to occur with a small gap between the separator block and the separator belts. Make the gap larger by turning the knob clockwise.

Double feed: Double feed tend to occur with a large gap between the separator block and the separator belts. Make the gap smaller by turning the knob counter-clockwise ("LOWER" arrow direction).



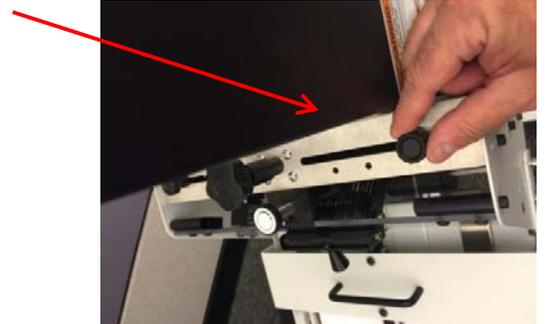
- 2) Once the initial gap is set, remove the envelope, and move it into position where it is firmly against the separator belts. There should naturally be about an 0.2 inch between the back edge of the envelope and the Wedge.



- 3) Now let's set about a 1/16" gap between the side frame and the envelope (on each side) making sure it's centered.

- 4) Now lock down the side frames. This is an important step that many miss ... but it 'pulls in' the bottoms of the side frames a little and contributes to how the product drops into the separation area.

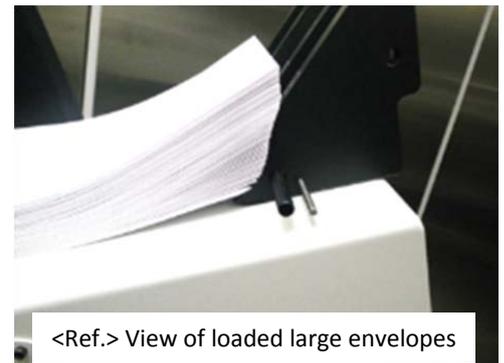
It is advisable at this point to recheck the gap (make sure it's not too tight (unmovable envelope).



- 5) In setting the wedge ... there are variations that could work depending on product size and stack size. For a box of Com10 sized envelopes, the following wedge set-up works best. Start adding envelopes a few at a time until a small stack forms. Make sure they are pressed firmly against the curved front of the feeder and then slide the wedge forward with the goal of keeping the first envelope in place with approximately the **0.2 inch overlap the Wedge** that we started with ... This should look similar to what is shown below ...

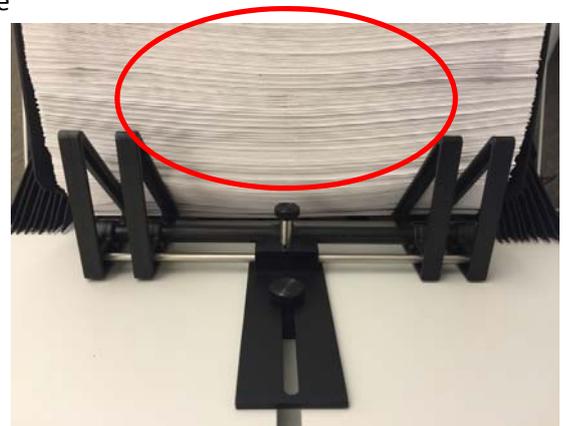


Correct wedge placement ...



- 6) In addition place at least one of the supports at the back of the wedge near the edges. For some envelopes, it's OK if the stack of product forms a slight 'bow' in the center (this is where the separator bands are all located).

For lighter envelopes, many times it's advantageous to space the back supports evenly across the stack (as shown on next page).



It is crucial that the final wedge placement also includes “squaring” up of the wedge. Reduction or elimination of product skew is a direct result of this adjustment.

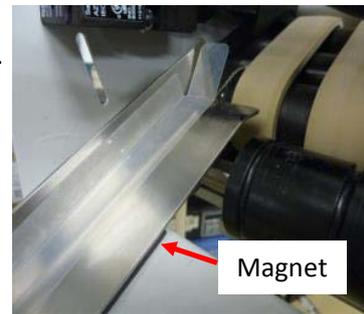
Incorrect!



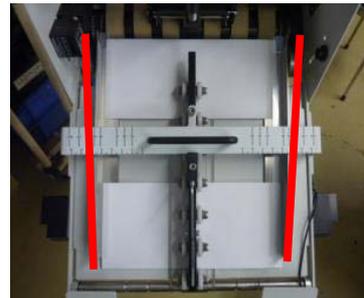
Correct !



- 7) A side guide is attached to a frame being attracted by a magnet. Align the edge of a magnet to the end of a frame facing the separation area as Photo shows. * Photo shows the side guide on the left. Do the same for the side guide on the right.

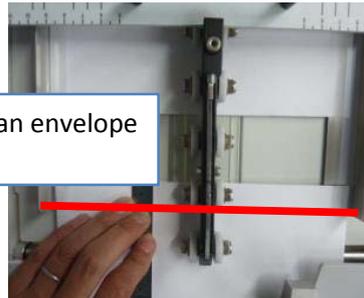


- 8) Set the side guides not in parallel as Photo shows. (Allow a little margin for the distance between the side guides in preparation for possible skew feeding of separated envelopes.)



- 9) It is desirable to set the side guides so that the distance between the ends of them near the printer is about 0.2inch (5mm) wider than the width of envelopes.

About 0.2inch (5mm) wider than envelope width at the end of guides



- 10) Start jogging the feeder to check the whole set-up.

It may take 20-30 envelopes to get the feeder to a place where the feeding is consistent.

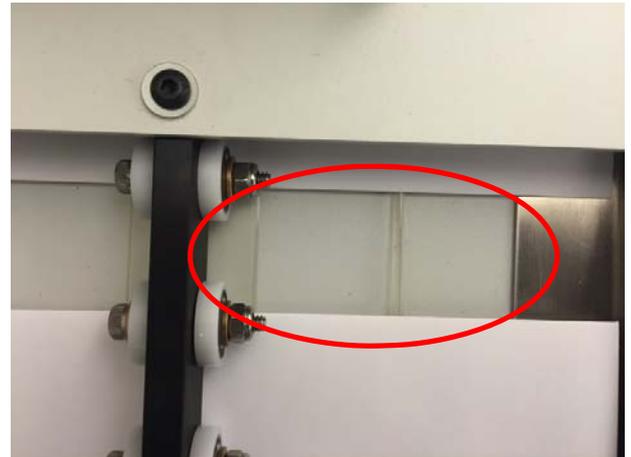
It may be necessary at this point to adjust the ‘gap’ or gate height knob, to alleviate a slight amount of skew or to get the gap between envelopes fairly consistent, but for the most part, if the wedge is set properly and squarely the envelopes should be exiting the separator in a fairly consistent fashion, with maybe an occasional slight amount of skew that gets corrected as the product moves down through the lower guide rails and belts.

- Make sure the envelopes are falling consistently in the stacker to the belts ! If the media is getting ‘hung up’ in the stacker there may be excessive delays in delivering sheets to the printer that will get interpreted as ‘no paper’ or ‘paper jams’. Make sure the side frames are not too tight and that wedge is set to allow the envelopes to continue to fall into that last 1/8” to ¼” gap so that they can be separated. If not, re-adjust the side frames and wedge as needed.

In most adjustments we are seeking about a 3/4” – 1” space between product ...

With these adjustments – and proper set-up of the Feeder and printer modifications there should be consistency when feeding the entire box of envelopes. If similar product is used for successive runs, there should be no modification needed.

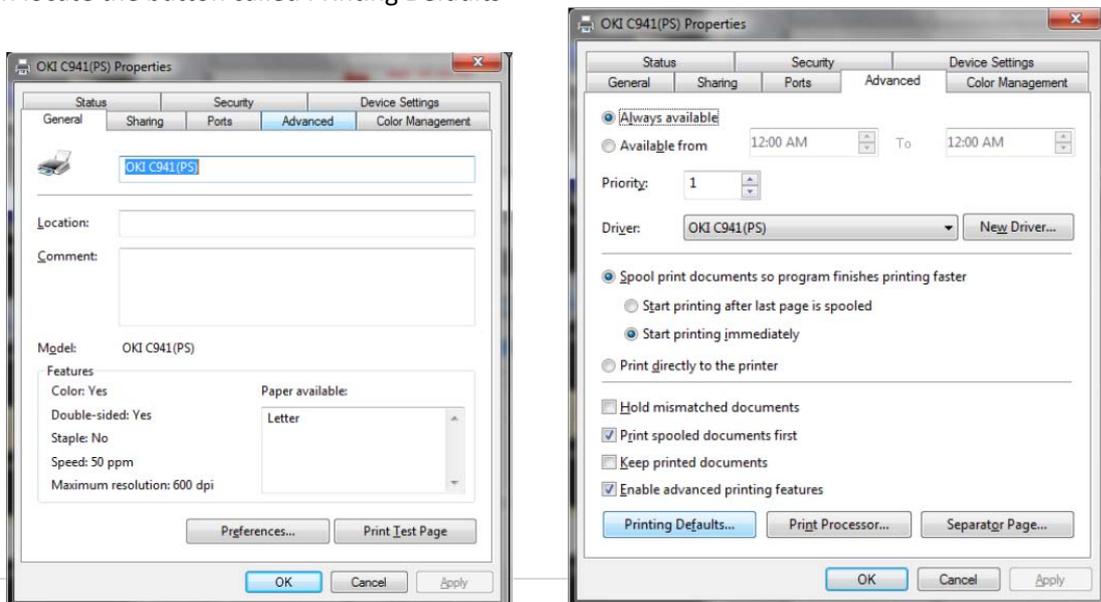
On the driver side – it’s a good idea to start out with Medium Heavy, plain paper settings. This should allow even fusing and printing of most commercial envelopes. Settings can vary from there as expertise grows.



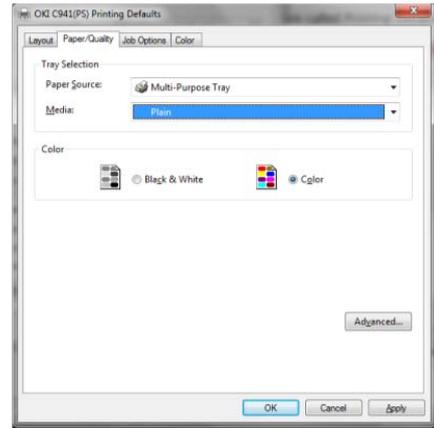
Driver speed selection / size selection

The following example shows how to set a default mode for our drivers. Setting the envelope settings in the driver, from applications is the same process, and the example below shows the optimum starting point.

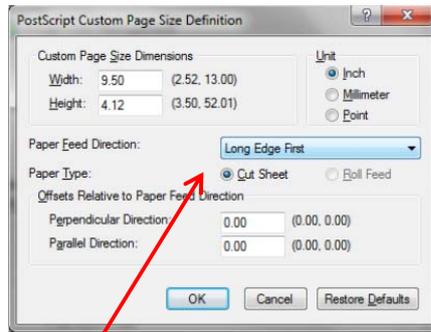
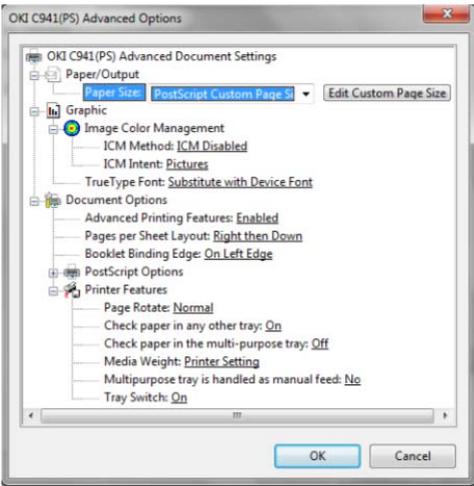
First locate the Printer Properties for the target device. Then locate the “Advanced” tab. Then locate the button called Printing Defaults



Then on the Paper Quality tab we will select “Multi-Purpose Tray” for the Paper Source and select “Plain” as the Media Type

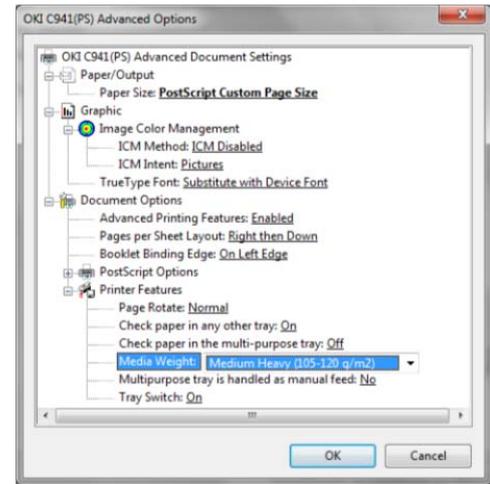


Next locate the Advanced tab ... Set Custom Page Size, so that whenever the custom size is selected it's set up for the most commonly used envelope. If this is Com-10 this can either be set using the Com-10 Custom as the page size (in the latest) driver, or by setting the custom size at 9.50" wide, 4.12" high, Long Edge Feed.



Make sure the size value, is set to long edge feed.

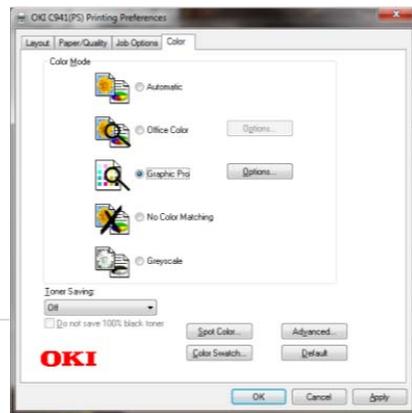
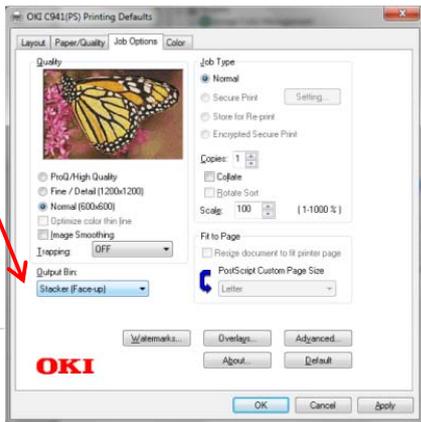
Then set Media Weight to set the speed and default fusing for Comm10 envelopes



Media Weight can be set to Medium Heavy, Heavy or whatever best describes the most commonly used envelopes.

The Job Options tab allows us to set resolution (generally 600x600 is perfect for envelopes) and the output orientation. On the Job Options tab, make sure that Stacker (Face Up) is set as the Output Bin, so the envelope drop to the output conveyor.

Lastly, set the Color mode ... Graphics Pro setting gives the best chance of preserving color, if the file contains color information (example – was saved as a PDFX-1a file).



Recommendations to Optimize Envelope Feeding on OKI C931/941/942 Color Printers

The following recommendations address paper jams due to envelope feeder timing, and help to reduce printer pausing. The results optimize throughput when printing Com-10 envelopes with an envelope feeder attached to the C931, C941 or C942.

1. Update the printer firmware to suite version is A01.40 (or higher). An outline of the update process and a link to the web-site are included near the end of this document.

2. Ensure the following printer menu settings are set at the operator panel:

a) **Menu → Print Adjust → Narrow Paper Speed = Normal 2; Press OK to set and then press On Line**

3. Sleep mode and power save modes can be adjusted to avoid excessive warm-up times in-between jobs. For example, adjust Power Save to 60 minutes:

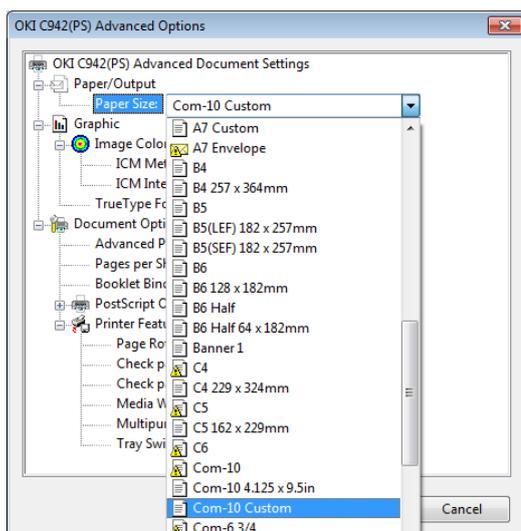
Menu → Menus → System Adjust → Power Save Time →60 min; Press OK to set and then press On Line

4. Recommended Driver Settings to minimize printer adjustment cycles for Com-10 envelopes:

a) **Media Weight: “Medium Heavy”**

b) **Media Type: “Plain”** (Selecting “Envelope” as the media type runs that printer at a slower speed)

c) **Media Size: “Com-10 Custom”** (appears in the latest PostScript driver) or select Custom Size and enter the dimensions for your envelope.



Select the “Custom” sizes (Com-10 Custom, A7 Custom,...) when using well behaved envelopes to maximize throughput. Selecting non-Custom sizes will run the printer slightly slower and may be helpful for some jobs.

Input Jams

The majority of paper jams at the MP Tray when using an envelope feeder are related to timing differences between the feeder and printer. The latest printer firmware includes a setting to help synchronize the timing:

Menu → Calibration → Specific Media Feed Mode

The default value is OFF. If you encounter frequent jams at the MP Tray, selecting 1 or 2 will allow additional time (milliseconds) for the envelope to be handed off from the feeder to the printer.

Paper Jam Recover Tip

The printer will recover faster from a paper jam if you simply open and close the side access door just below the MP Tray. Opening a front panel used to access toners and drums triggers the printer to perform calibration cycles, which take longer.

Firmware Update

Here are the general steps:

1. Download and install the "Windows" version of the firmware update tool from the following link:

<http://global.okiprintingsolutions.com/FWInterface.nsf/frmmain?OpenForm&Lang=en&RF=http://global.okiprintingsolutions.com/FWInterface.nsf/frmMain?OpenForm&Lang%3Cen%3E>

The utility has a small footprint and runs directly from the EXE file (no install program).

2. Run the utility. On the 4th or 5th screen, you will be requested to "Specify the Update Method."

Select the radio button "The latest version of firmware will be downloaded..." and press "Next" to continue.

Search the local network or USB connection. If necessary press the button "Environment Settings" to add the printer's IP address for the Network search range.

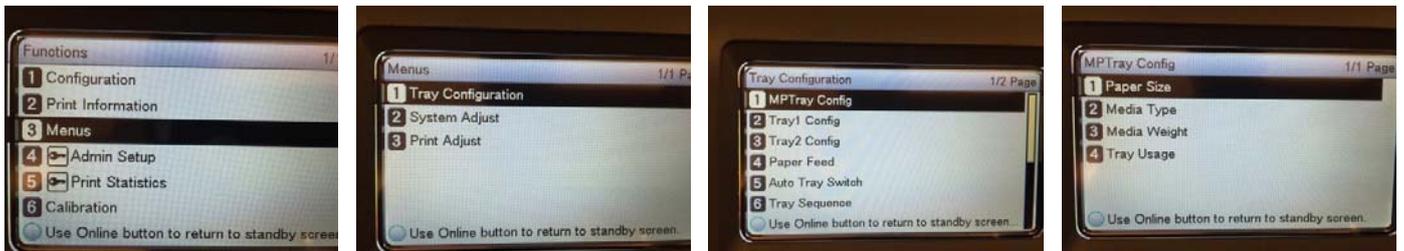
The Admin password for the printer is "aaaaaa" (lower case "a" six times)

RIP Settings

Print setting in Windows and Mac drivers are a little different compared to the setting within a RIP, although the end principles are the same. The general settings to look for are:

- Selection of the exact media size
- Selection of media weight and paper type (which control imaging and fusing settings)
- Making sure the Media Source is the MPTray feed path (path from the feeder) and the output is Face Up (path to the conveyor)
- Selecting color settings and resolution
- Discerning between envelope mode in the printer and direct print (plain paper) mode (C931/941/942)

The RIPs are geared toward providing additional control and adjustment of color. There are times, however, when they can be a little confusing with regards to expected speed. This is because they are possibly sending information to the printer that the size is an 'envelope' which will send the printer into envelope mode (slower printing with less fuser pressure). The printer supports envelope sizes that will invoke envelope mode (ex. Com-10) and settings which will allow selection of the media weight / paper type (ex. Com-10 Custom). If there is a mix of settings, the easiest way to eliminate this is to select 'Printer Setting' in the driver and set this at the printer panel as follows:



Menu navigation ...

Settings ...



EFI Fiery CWS C9 Server – Com-10 Envelope Settings

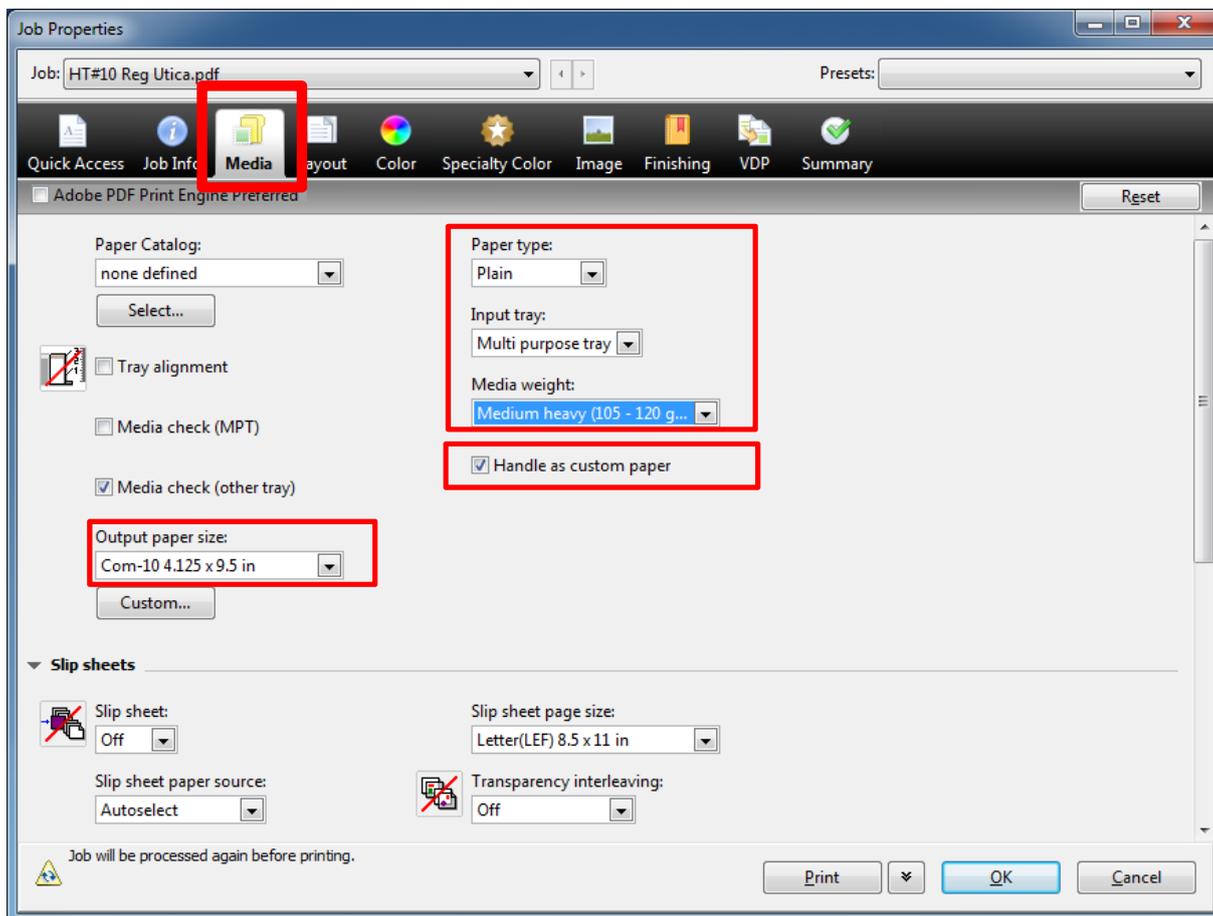
Settings for printing Com-10 envelopes:

Using Command WorkStation, highlight the job and click on Properties. Then select the Media tab.

- Output paper size: **Com-10 4.125 x 9.5 in** (Select Com-10 from the pull down list)
- Paper Type = **Plain**
- Input tray = **Multi purpose tray**
- Media Weight: **Medium heavy** (This setting is best for avoiding temp adjust delays)
- Enable “**Handle as custom paper**” (as shown below). This disables the envelop handling print mode that runs the printer at a slower speed.

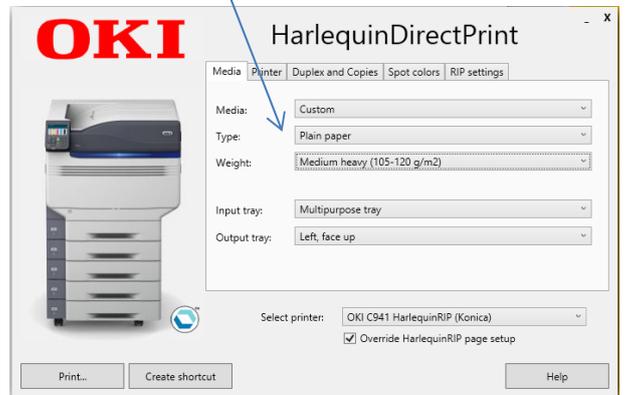
Select the Finishing tab to change...

- Output delivery: **Face up – normal order** (Located on the “Finishing” tab of the CWS job properties.



Harlequin Direct Print set-up for envelopes

Selection in Harlequin Direct Print is fairly straightforward (and driver envelope sizes are in process of being added). The settings are shown below. Custom size (then specify in inches/mm) and use plain paper and set the media weight.



Fiery System 8e and the pro900DP set up for envelopes

Key PS driver settings (similar to driver) include:

- Selecting the proper page size
- Making sure the Media Source is the MPTray feed path (path from the feeder)
- Turning off media check functions
- Selecting the correct media weight (this is a key for reliable feeding, image transfer and fusing)
- Color and resolution adjustments

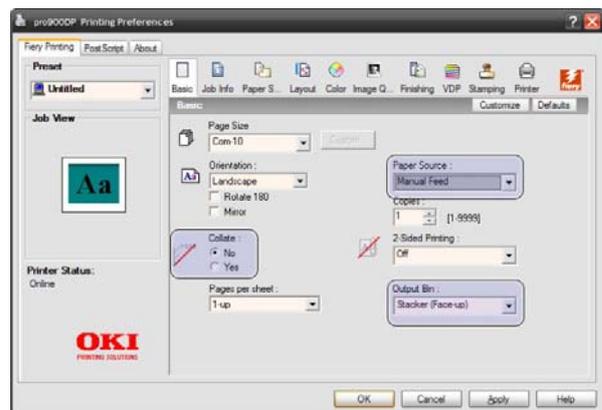
The Basic Tab Set-up (Windows)

After choosing the correct page size, ensure the following are selected in the Basic tab of the driver.

- Page Source – should be set to Multi-purpose Tray. This is where the feeder is connected.
- Output Bin – should be set to Stacker (Face-up). This is where the conveyor is located.
- Collate – generally, this should be set to 'No', and should always be set this way for a single image printed many times.

It is important to note that the Basic Tab can be customized to hold the most frequently used settings.

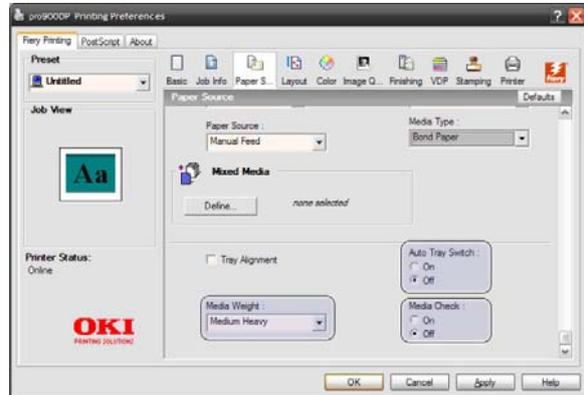
This in combination with the Preset Tab (where all settings can be saved for a particular type of print job/media) can make setting up the jobs in the pro900DP simple (a click on the Preset and all settings for particular envelope job are set)



The Paper Source Tab Set-up

After choosing Media Type in the Paper Source tab, ensure the following are selected.

- Auto Tray Switch – this should be set to 'Off' so that when media from the feeder is empty the printer does not attempt to pick pages from the other media trays.
- Media Check – this should be set to 'Off' so the system does not continuously validate the thickness and attempt to adjust temperature (this can slow printing considerably, depending on the type of printing).
- Media Weight – please refer to next section (3.2) for specifics on the media weight settings.



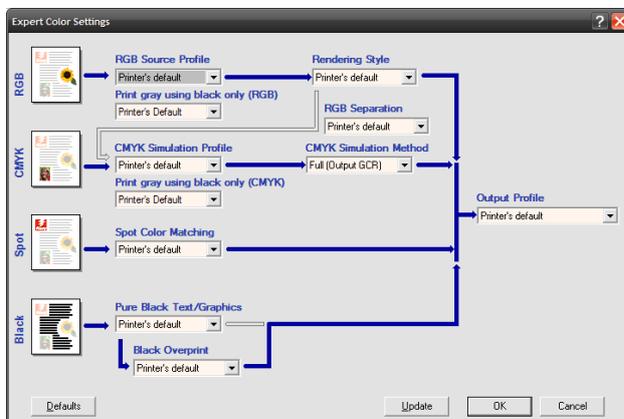
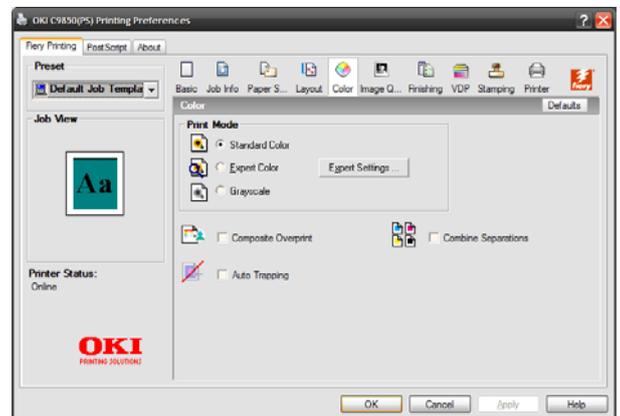
Note: The Basic tab can be set-up (using the 'Customization' button) to keep all the most used settings for the pro900DP in one place. Refer to the Fiery Printing for Windows Reference (on CD) for more details.

The MAC PS driver does not support this function but will support the Preset function to store all settings for a particular type of job (recommended)

The Color / Image Quality Tabs

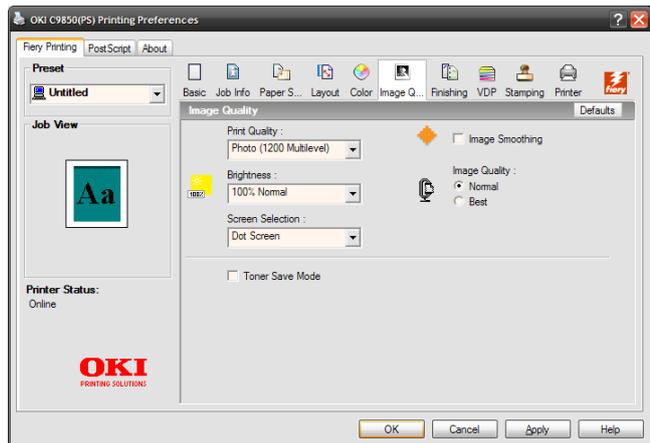
The **Color** tab allows for simple or very detailed color adjustments. For many applications, Standard Color will provide a strong correlation between Windows color (sRGB) and the output on the printer.

Fiery Expert Color settings (shown below) allow aspects of the image/content to be fine tuned. Custom profiles, rendering intents and spot color matching can be applied here. For additional detail, please refer to the Fiery Color Technical Reference, the Fiery Printing for Windows (Mac) Reference, and the Fiery Print Options Guide on the CD.



The **Image Quality** tab includes the following key settings:

- **Print Quality:** adjust between 600dpi, 1200dpi, and 1200dpi multi-level mode. For detailed logos on rough paper, it may be advantageous to slightly thicken fine lines using 600dpi mode. Additionally 1200dpi multi-level mode may affect print speed, but can be used to smooth-out gradients in images.
- **Image Quality:** adjust between Normal and Best. Selecting 'Best' can (in some cases) have a small affect print speed.
- **Image Smoothing:** this can be used to minimize graininess in the output when using low resolution images.
- **Brightness:** globally adjusts darkness of the output. Lightening the image can help fusing on difficult media.



Print and Envelope Issues (Troubleshooting)

- **Wrinkle improvements**

Envelope wrinkle can come from a several sources (moisture, for example) but is nearly always attributable to air gaps in the envelope and construction of the envelope (not being completely square) and the pressure of fusing. This is why the performance with regards to wrinkle, will almost always be better when feeding on the long edge. We recommend all envelopes on the long edge (if possible). Some envelopes (thinner, large stocks) may not be able to printed in a laser/LED printer without wrinkle, under any circumstances.

On the C931-Dp and C941-DP there is an envelope mode available that can help with reducing wrinkle. This mode feeds the product slowly, and uses reduced pressure at the fuser to help combat wrinkle. It is also possible to change media weight settings to change speed to help improve wrinkle.

On the pro900-DP system changing media speeds may be the only way to reduce wrinkle. There is a low pressure fuser available for this design, but that was designed more to reduce embossing (pressing lines in the stock from the folded layers) than for wrinkle. Media should be tested with this fuser, prior to purchasing to ensure the results are satisfactory.

- **Throughput of envelopes**

In terms of customer expectations, it's key to realize that general statements about speed ("hey, it prints 60 envelopes a minute") are affected by a variety of factors in everyday running of a box of envelopes. The following are factors that may not necessarily impact the burst speed, but may impact productivity.

- 1) All digital printers have cleaning and maintenance cycles. An occasional cleaning cycle will generally delay printing and have an effect on total time to print.
- 2) Printing higher density/higher density designs requires additional heat and time to properly fuse the design on the envelope (we primarily refer to this as media weight). So while a lighter density design may print at 55 envelopes per minute, a higher density design on the same envelope may print at 45 envelopes per minute.
- 3) Specialty envelopes (glossy surfaces, rough surfaces, etc.) can also change the settings needed to successfully print the envelopes.
- 4) Certain envelope constructions require higher transfer settings, to transfer toner through, and onto the paper. These higher transfer settings are associated with the heavier media weights, which are generally slower in speed.

We recommend starting a 24# paper envelope at Medium-Heavy settings. This is generally an optimum point for many design styles, envelope constructions and surfaces. Larger catalog envelopes should start at heavier media weights.

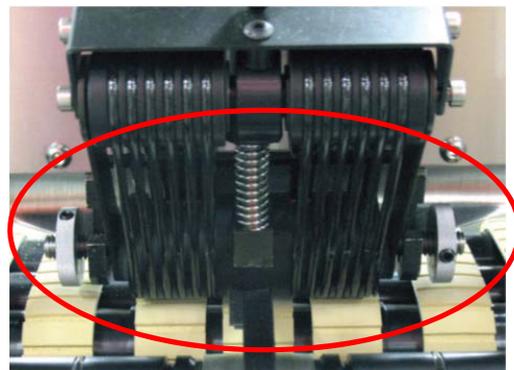
An example of this action is as follows, the C931-DP system can print 60 envelopes/minute. Printing a high quality color design on well constructed Com-10's, and the Medium heavy settings, with maintenance cycles, starts/stops etc. will most likely result in a print rate of approximately 45-48 envelopes/minute across the entire box (500 envelopes). Setting this expectation up front can help eliminate misunderstandings about how all these factors come into play during larger print runs.

- **Skew issues**

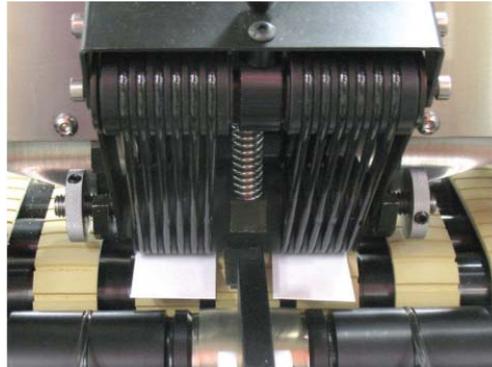
If there still seems to be skew issues that cannot be resolved with adjusting the wedge at the rear of the stacker, it may be necessary to adjust/align the gate assembly. This generally comes factory set and does not need to be adjusted. But this can be checked as follows if there is doubt.

First, visually look at the gate assembly in relation to the "J" hooks they reside in.

If properly adjusted from the factory there should be equal spacing between the side frame(s) of the gate assembly and the inside of the "J" hook on each side. If skewing of product coming out of the gate after confirming the equal spacing is still evident, an additional horizon adjustment can be checked and made. This should only be made as a last resort



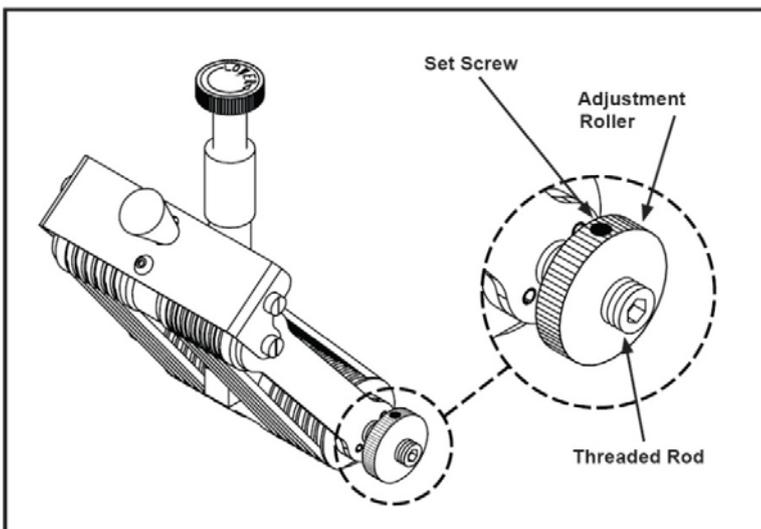
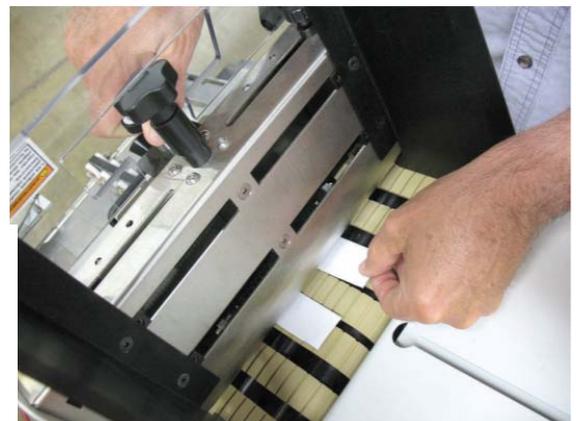
Take two pieces, approximately 1" wide of same thickness and place under both the left and right sets of O-rings under the gate.



Perform the same drag test as if you were setting up new product as in Step 1. If the gate has proper horizon adjust, there should be equal drag on both sides of the gate with both pieces of product.

If you cannot achieve proper horizon adjustment you can use the "knurled" knobs (One on each side) to secure the proper position.

Once set, these roller wheels should be rolled into place so that they just touch the 'J-hooks', so that the gate does not move from side to side.



Horizon Adjustment Mechanism (shown on Advancing O-Ring Gate)

Conditions for Successful Envelope Feeding

(1) Use only media that is compatible with the feeder, is within the media size recommendations and the media is compatible with the printer.

(2) Do not use envelopes that have any of the followings. Use of those contributes to frequent jams.

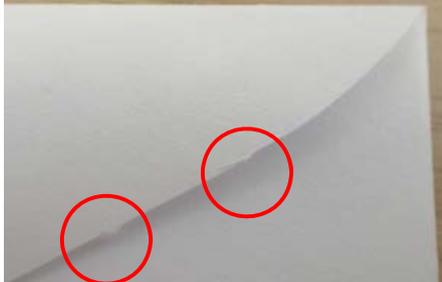
- Envelopes with a twist or large curl



- Envelopes that are swelled with moisture (No use in hot and humid conditions)



- Envelopes with a rise, flaw or burr on overlapping layers



- Envelopes with a long flap or thin envelopes may jam at the entrance of the printer. Often the long flap drags when the top of the envelope is being pulled into the printer.

The reduced torque retard roller may help reduce jams (**Do not scrap the original retard roller**)

Original retard roller is marked nothing. Reduced torque versions have orange label, and/or white or blue mark.

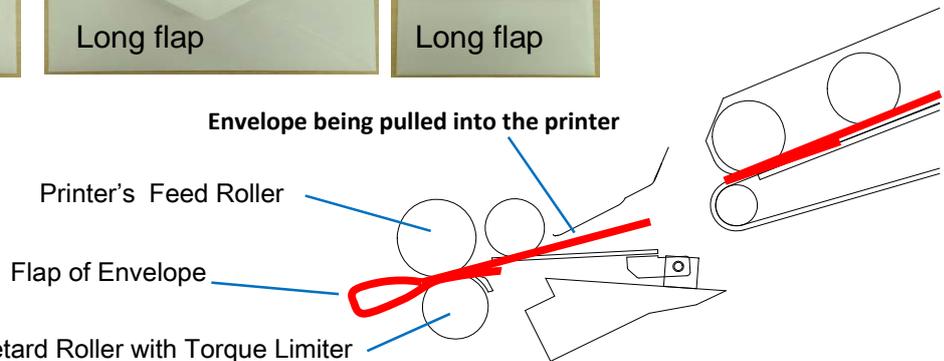
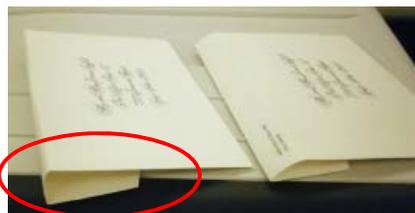
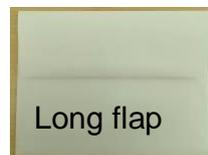
Orange label
or
White mark



OR



Retard roller	Parts No	Parts Name
Original	: 44732301	Roller-Assy-Retard
Reduced torque	: 46315901	Roller-Assy-Retard(200)



(3) Load quantity: loading envelopes in a quantity larger than either of the followings contributes to frequent jams.

- COM-10 or small: 500 envelopes
- Larger than COM-10 (ex. 9"x12", 10"x13"): 100 envelopes

(4) Performance decline

Even with recommended feeder operation settings shown below, extended runs and high volume printing may experience pausing or interruptions along with the message "temperature adjustment." These conditions are often related to the printer wanting to cool down the fuser to preserve fuser life.

Running the printer with the appropriate media settings will often provide longer sustained runs.

Recommended settings for Com-10 envelopes:

Menu -> Print Adjust -> Narrow Paper Speed : "Normal 2"

Menu -> Tray Configuration -> MPTray Config -> Media Weight: "Medium Heavy"

Menu -> Tray Configuration -> MPTray Config -> Media Type: "Plain"

Menu -> Tray Configuration -> MPTray Config -> Paper Size: "COM10 custom"

(Please select "custom" envelope sizes)

(5) **Jams** – During a continuous run, the C931/C941/C942 printers are often applying toner to the intermediate transfer belt before the target envelope has actually arrived at the printer's feed roller. The printer reports a "jam" if an envelope is late in arriving.

The printer menu provides a setting to fine tune the timing for envelope feeding.

Within the Calibration menu, use the setting for "**Specific Media Feed Mode**" to slightly expand the interval (and timing) between envelopes. If jams are frequent and related to timing issues, change the setting from OFF (default) to 1 or 2.

How to set: Menu -> Calibration -> Specific Media Feed Mode: Select 1 or 2 and press OK.

- **General Recommendations for envelopes**

- Test envelopes before purchasing large quantities.
- When possible, use envelopes designed and recommended for laser printers.
- Envelopes should be free from twist, curl or other deformations. Glue must remain intact when subjected to hot roll pressure fusing used by this type of printer.
- Windowed envelopes must be designed for higher fusing temperatures utilized by laser printers. Use of inappropriate media may damage the printer's fuser and imaging components.
- The preferred method for loading envelopes: Load envelopes face-up, with the flap down and closed, and the flap edge entering the printer first.
- The printer offers a range of media settings that influence image transfer strength, speed, and fuser temperature. In many cases, print quality can be improved by adjusting media settings. Heavier media settings may help to ensure toner is being pulled onto the envelope in critical areas, while lighter settings may help to minimize glossy hotspots.
- In some cases, the layout design or graphic artwork may need to be adjusted in order to deliver good results on a specific envelope. Or, some jobs will need to be paired with a specific envelope style if the client's artwork can not be adjusted.
- In some cases, the placement of the return address and/or logo may have to be adjusted to optimize image transfer along the edge of the envelope or where the envelope transitions from 2 to 3 layers of media.
- Avoid printing with the envelope flap open. Heat and humidity may result in a build-up of adhesive on printer components and contribute to frequent jams and degraded print quality.
- Watch out for envelopes with a thick layer of adhesive or an uneven build-up of glue along the edges of the flap.
- Do not use pressure seal envelopes that must be printed with the flap open and expose the printer to gummy adhesive.
- Store envelopes in a dry area. Excess moisture released while printing (fusing) will tend to seal envelopes. A controlled environment may be required if humidity levels are high.
- Small pockets of air trapped inside an envelope can also interfere with the printing process resulting in random voids. Some envelope designs are more prone to trapping air than others. Flattening envelopes prior to printing may help.
- Be sure to incorporate your client's requirements when selecting envelopes.
- Some customers may require an envelope that is conducive to a specific application, such as automated insertion.

If you have any questions, please contact the dealer you bought.

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