

Now that all considerations have been addressed, its time to create your die press project. Ensure the success of your project by employing the following guidelines.

The Basics

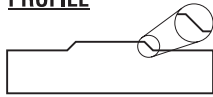
The first step to die press finishing success involves understanding die press basics. Use the following guidelines to maximize production efficiency and minimize cost and turnaround for your project.

DIE STYLE

PROFILE

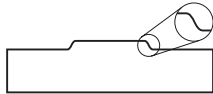
DETAILS

Emboss, Raised Flat w/Bevel



- Used for single-level embossing
- Beveled die edges create standard relief
- Used with thicker fonts and line art
- Chemically etched or CNC machined
- Least expensive embossing die style

Emboss, Raised Round



- Used for single-level embossing
- Rounded die edges create deeper relief
- Used with thinner fonts and line art
- Chemically etched or CNC machined
- More expensive than raised flat dies

Emboss, Multi-level



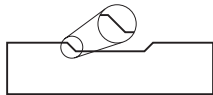
- Used for multi-level embossing
- Used for standard and deeper relief embossing
- Usually CNC machined
- More expensive than raised round dies

Emboss, Sculptured



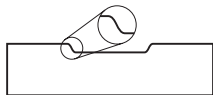
- Used for multi-level embossing
- Used for standard and deeper relief embossing
- Usually hand etched
- Most expensive embossing die style

Deboss, Flat w/Bevel



- Used for single-level debossing
- Beveled die edges create standard relief
- Used with thicker fonts and line art
- Chemically etched or CNC machined
- Least expensive debossing die style

Deboss, Round



- Used for single-level debossing
- Rounded die edges create deeper relief
- Used with thinner fonts and line art
- Chemically etched or CNC machined
- More expensive than raised flat dies

Deboss, Multi-level



- Used for multi-level debossing
- Used for standard and deeper relief embossing
- Usually CNC machined
- More expensive than raised round dies

Deboss, Sculptured



- Used for multi-level debossing
- Used for standard and deeper relief embossing
- Usually hand etched
- Most expensive debossing die style

Artwork and Dies

The second step to die press finishing success involves creating correct artwork and dies. Use the following guidelines to maximize production efficiency and minimize cost and turnaround for your project.

- **Layout** - There are numerous layout factors that affect the quality of your die press projects. Guidelines for each are listed below.
 - **Free Templates**
 - a) Combine your artwork with one of our free project templates to create an economical yet custom die press project. Download one of over 200 templates by visiting www.flexfinishing.com.
 - **Sheet Size**
 - a) Determine the minimum sheet size for your project by adding 1/2" to all four dimensions of the flat diecut piece. Be sure to include the standard 3/4" measurement for all glue tabs and the gripper margin for the equipment being used. Review the Die Press Equipment Specification table that follows for a list of required gripper margins.
 - **Orientation**
 - a) Layout the head of the diecut piece closest to the gripper edge of the printed sheet. Be sure to include the necessary gripper margin as previously noted.
 - **Gripper and Margins**
 - a) Provide a 5/8" gripper margin for all press sheets to be die cut, foil stamped or embossed.
 - b) Provide an additional 5/8" margin on the remaining three sides of the press sheet. Design your artwork to avoid using this 5/8" border.
 - **Multiples Up**
 - a) Do not nest pieces unless the die will be created with the same nesting layout and all final knife trims can be made without cutting the other die-cut pieces.
 - b) Layout 2-up presentation folders in the same direction with each folder centered in its respective half of the press sheet. The finished press sheet will show the foot of one folder closest to the head of the second with the head of both folders oriented to the gripper side of the sheet. When done correctly, the press sheet can be cut in half and both halves of the sheet will have the same distance from the gripper edge of the sheet to the head of the printed presentation folder. If folders cannot be centered as detailed above, the distance between each folder should equal (cannot be less than) the distance from the gripper edge of the sheet to the head of the first printed folder. Review the Die Press Equipment Specifications table that follows to ensure that you use the correct gripper margins.
 - c) Minimize the density of images that will be die cut, foil stamped or embossed. The fewer the images that register to the die, the faster the make-ready and the more consistent the quality of the finished piece. Additionally, kiss cutting sticker sheets without cut-through becomes exponentially more difficult as the number of images increases. Remember, excessive setup and processing time may be charged to job.
 - d) Reduce the density of images by increasing the space between images when printing "sticker sheets". As the number of images increase, the more difficult it becomes to eliminate liner cut-through.
 - **Glue Tabs**
 - a) Set the width of all glue tabs to 3/4". Use of other glue tab widths may create a problem, so consult with us prior to finalizing your artwork.
 - **Bleeds**
 - a) Use a 1/8" or 3/16" bleed beyond the die-cut or kiss-cut edge of the piece to ensure correct registration.

- **Registration**
 - a) Minimize misregistration by exactly matching your digital die artwork to your offset and digital press artwork. Create your die artwork first and add your press artwork on a separate layer.
 - b) Make allowances for the sheet-to-sheet misregistration that occurs with the digital printing process. Because color breaks and printed images are not consistent from sheet to sheet, the finished die press process (foil stamping, embossing and die cutting) will appear to have some movement. The easiest way to resolve this problem is to build loose registration into your project. One example involves the use of a die cut window on the front of a document cover. Create the artwork such that the window does not register to any images including a window border.
 - c) Do not knock-out areas to be foil stamped unless you are sure the foil will not adhere to the ink/toner/coating.
- **Digital Measurements**
 - a) Use digital measurements in your illustration software rather than "eyeing" placement of the die lines.
- **Fonts and Lines** - In addition to layout factors, correct handling of fonts and lines will also affect the quality of your die press projects. Review the following for correct font and line guidelines.
 - **Outlines**
 - a) Convert all text to outlines (strokes) and make all elements 100% BLACK in color before transmitting digital artwork. Embedding fonts, rather than converting text to outlines, adds one more step to the process and can create font compatibility issues.
 - **Fine Fonts**
 - a) Thicken or "spread" individual letters of text that have been converted to outlines when the font contains thin or wispy lines. These fine lines may become barely visible once foil stamped or embossed.
 - **Tight Font Spacing**
 - a) Increase spacing between letters, also known as "kern", when using fonts with tight letter spacing. Foil stamping and embossing tends to fill-in text with tight letter spacing.
 - **Fine Lines**
 - a) Do not use "hairline" thickness for lines that will be foil stamped and/or embossed. These lines are too thin to stamp properly. Choose a thicker line or "spread" the outline on the existing thin line.
- **Digital Artwork and Customer-supplied Dies** - Once the artwork has been finalized, handle the resulting digital file or die as follows.
 - **Digital Artwork** - Digital artwork for die press projects should be sent to artwork@bookbindery.net. We can accept:
 - a) Adobe Illustrator files
 - b) Adobe Acrobat files
 - c) Encapsulated Postscript (eps) files
 - **Customer-supplied Dies** - We will accept customer-supplied dies, but realize that die modifications (ie. notching steel rules) may be necessary to ensure compatibility with our equipment. See the Die Press Equipment Specifications table that follows.

Printing

The third step to die press finishing success involves printing the sheets that will be converted into a project. Use the following guidelines to maximize production efficiency and minimize cost and turnaround for your project.

- **Die Cutting** - Prepare components for use in die cutting projects per the guidelines below.
 - **Stock**
 - a) Select a stock weight that can handle the stress of the next finishing process. For example, a thick stock finished into a presentation folder with a 1/8" capacity pocket may crack. Increasing the pocket capacity to 1/4" may eliminate any cracking problems. Be sure to adequately test thick stocks prior to making final stock decisions.
 - b) Use a stock that is at least 8pt. thick if folding or gluing is required. Lighter stocks should be tested for compatibility with our equipment/process.
 - c) Do not trim either the gripper edge or side guide from the press sheets. We will trim your press sheet as needed prior to processing.
 - **Printing and Coating**
 - a) Use the same gripper edge and side guide throughout the press run. The die press operator will use the same gripper edge and side guide to maximize the consistency of image registration.
 - b) Allow ink to completely dry on the sheets to avoid offsetting onto other sheets.
 - c) Knock out all varnish and aqueous coatings on glue tabs. Most adhesives will work on these coatings, but we can eliminate any issues by avoiding use of these coatings.
 - d) Do not UV coat or film laminate glue tabs, because most standard adhesives do not adhere to these coatings. Run the UV screen or laminating film short of the glue tabs. The use of UV coating or laminating film on glue tabs may require the use of special adhesives and/or manual processing.

- **Foil Stamping** - Prepare components for use in foil stamping projects per the guidelines below.
 - **Stock**
 - a) Use a stock with a finish and texture that enhances the reflective properties of the foil. Remember, the more calendered the stock, the better the reflective properties will be. Cast coated stocks are the best when high reflection is required.
 - b) Use a stock that is not highly textured or "spongy" when foil stamping fine lines, detailed images or text with tight font spacing. Fine lines may become barely visible, while detailed images and text with tight font spacing tends to fill-in when using these stocks. Additionally, foil may not stick to highly textured "linen" and "columns" type stocks due to the peaks and valleys manufactured into these sheets. The required increase in pressure to make the foil stick may result in text fill-in or sheet bruising (flattening the texture).
 - c) Use a stock that is at least 8pt. thick if folding or gluing is required. Lighter stocks should be tested for compatibility with our equipment/process.
 - d) Do not trim either the gripper edge or side guide from the press sheets. We will trim your press sheet as needed prior to processing.
 - **Printing and Coating**
 - a) Use the same gripper edge and side guide throughout the press run. The die press operator will use the same gripper edge and side guide to maximize the consistency of image registration.

- b) Use wax-free and silicone-free inks and coatings when foil will be stamped directly onto printed areas of the sheet. If wax-based or silicone-based inks must be used, knock out the areas to be foil stamped.
 - c) Allow ink to completely dry on the sheets to avoid offsetting onto other sheets and to ensure correct adhesion of foil to the sheet.
 - d) Apply varnish, aqueous and UV coatings to printed press sheets offline or in a separate press run. Inline coating does not allow enough dry time for the underlying offset inks. Foil will adhere to the dry top coating, but the coating may separate from the underlying wet press inks.
- **Embossing/Debossing** - Prepare components for use in embossing/debossing projects per the guidelines below.
 - **Stock**
 - a) Communicate the type and weight of stock you will be using, so we can cut the best bevel angle for the embossing/debossing die.
 - b) Choose a stock manufactured with long paper fibers when a deeper than normal emboss/deboss is desired.
 - c) Avoid using hard or coated stocks that must be embossed/debossed, as these may split or crack.
 - d) Use a stock that is at least 8pt. thick if folding or gluing is required. Lighter stocks should be tested for compatibility with our equipment/process.
 - e) Do not trim either the gripper edge or side guide from the press sheets. We will trim your press sheet as needed prior to processing.
 - **Printing and Coating**
 - a) Use the same gripper edge and side guide throughout the press run. The die press operator will use the same gripper edge and side guide to maximize the consistency of image registration.
 - b) Allow ink to completely dry on the sheets to avoid offsetting onto other sheets.
 - c) The use of varnish, aqueous or UV coatings will not affect the quality of the finished embossed piece.
 - **Foil Embossing** - Prepare components for use in foil embossing projects per the guidelines below.
 - **Stock**
 - a) Use a stock with a finish and texture that enhances the reflective properties of the foil. Remember, the more calendered the stock, the better the reflective properties will be. Cast coated stocks are the best when high reflection is required.
 - b) Use a stock that is not highly textured or "spongy" when foil stamping fine lines, detailed images or text with tight font spacing. Fine lines may become barely visible, while detailed images and text with tight font spacing tends to fill-in when using these stocks. Additionally, foil may not stick to highly textured "linen" and "columns" type stocks due to the peaks and valleys manufactured into these sheets. The required increase in pressure to make the foil stick may result in text fill-in or sheet bruising (flattening the texture).
 - c) Choose a stock manufactured with long paper fibers when a deeper than normal emboss/deboss is desired.
 - d) Avoid using hard or coated stocks that must be embossed/debossed, as these may split or crack.
 - e) Use a stock that is at least 8pt. thick if folding or gluing is required. Lighter stocks should be tested for compatibility with our equipment/process.
 - f) Do not trim either the gripper edge or side guide from the press sheets. We will trim your press sheet as needed prior to processing.

- Printing and Coating

- a) Use the same gripper edge and side guide throughout the press run. The die press operator will use the same gripper edge and side guide to maximize the consistency of image registration.
- b) Use wax-free and silicone-free inks and coatings when foil will be stamped directly onto printed areas of the sheet. If wax-based or silicone-based inks must be used, knock out the areas to be foil stamped.
- c) Allow ink to completely dry on the sheets to avoid offsetting onto other sheets and to ensure correct adhesion of foil to the sheet.
- d) Apply varnish, aqueous and UV coatings to printed press sheets offline or in a separate press run. Inline coating does not allow enough dry time for the underlying offset inks. Foil will adhere to the dry top coating, but the coating may separate from the underlying wet press inks.

- **Kiss Cutting** - Prepare components for use in kiss cutting projects per the guidelines below.

- Stock

- a) Choose a label stock with a release liner that is at least .004 thick. The thicker the liner, the better we can minimize liner cut-through.
- b) Do not trim either the gripper edge or side guide from the press sheets. We will trim your press sheet as needed prior to processing.

- Printing and Coating

- a) Use the same gripper edge and side guide throughout the press run. The die press operator will use the same gripper edge and side guide to maximize the consistency of image registration.
- b) Allow ink to completely dry on the sheets to avoid offsetting onto other sheets.

- **Perforating/Scoring** - Prepare components that will be perforated and/or scored per the guidelines below.

- Stock

- a) Choose a perforation tooth pattern that is appropriate for the stock and project. Using a microperf (32 teeth) pattern on an 80# cover weight stock may result in a premature separation of the perforated piece.
- b) Carefully select a stock when it will be UV coated over a dark ink, black or blue, as this coating/ink combination has a tendency to crack when creased and folded.
- c) Use a stock that is at least 8pt. thick if folding or gluing is required. Lighter stocks should be tested for compatibility with our equipment/process.
- d) Do not trim either the gripper edge or side guide from the press sheets. We will trim your press sheet as needed prior to processing.

- Printing and Coating

- a) Use the same gripper edge and side guide throughout the press run. The die press operator will use the same gripper edge and side guide to maximize the consistency of image registration.
- b) Allow ink to completely dry on the sheets to avoid offsetting onto other sheets and to ensure correct adhesion of foil to the sheet.
- c) Knock out all varnish and aqueous coatings on glue tabs. Most adhesives will work on these coatings, but we can eliminate any issues by avoiding use of these coatings.
- d) Do not UV coat or film laminate glue tabs, because most standard adhesives do not adhere to these coatings. Run the UV screen or laminating film short of the glue tabs. The use of UV coating or laminating film on glue tabs may require the use of special adhesives and/or manual processing.

Packaging

The fourth step to die press success involves packaging your printed material for safe transportation to our production facility. Use the following guidelines to maximize production efficiency and minimize cost and turnaround for your project.

- **Method** - The two methods available for packaging your material are detailed below.
 - **Corrugated Cartons**
 - a) Use the smallest corrugated carton necessary to securely package your material.
 - b) Large cartons should be used if you do not have the necessary capabilities to move and handle pallets.
 - **Pallets**
 - a) Palletize large jobs to reduce your packaging time and transportation costs.
 - b) Use gaylords (corrugated wall and ceiling panels) when maximum protection is required.
- **Stacking** - If pallets are used, material should be stacked as follows.
 - **One Stack Per Pallet**
 - a) Straight stack your material using the same orientation (head to head, foot to foot). Using offset or swivel stacking and different orientations within the same stack can increase job processing time and add costs to your job. (Figure D)
 - **Multiple Stacks Per Pallet**
 - a) Straight stack your material using the same orientation (head to head, foot to foot). Additionally, use the same orientation for all stacks on the pallet. Using offset or swivel stacking and different orientations within the same stack can increase job processing time and add costs to your job. (Figure E)
- **Identification** - Material should be identified for ease of handling as follows.
 - **Contents**
 - a) Mark each carton to identify the project contained within. The better the identification and organization of the contents, the faster the job will be processed.
 - **Gripper and Side Guides**
 - a) Mark the gripper edge and side guide on the top sheet of the stack of uncut press sheets.
 - b) The die press operator will attempt to maintain the same guides used with the original printing equipment. This step is important when close registration of a cut or stamped image is required.
 - **Sample Quality vs. Standard Quality vs. Setup Stock**
 - a) Keep sample quality, standard quality and setup quality stock separate. Do not mixed qualities within the same packaged unit.
 - b) Clearly mark the quality of the product contained within each carton or on each skid.
- **Documentation** - Documentation pertinent to the correct completion of the order should also be included with the packaged job components.
 - **Purchase Order**
 - a) Record general order information such as the purchase order, contact person and due date.
 - b) List required quantity, acceptable overrun quantity, and special transportation needs and/or carriers.
 - c) List all operations necessary to correctly complete your job.
 - d) List special job details such as element/film/foil colors, number and size of folder pockets, location style and number of business card slits, diameter and style of door hanger circles and radius of round corners.

ACCEPTABLE BOOK PACKAGING

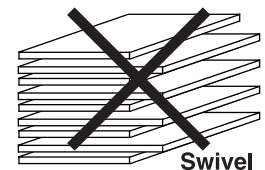
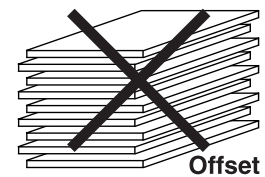
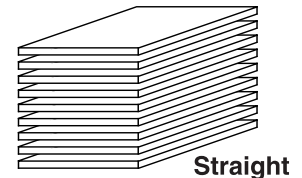


Figure D

- e) Indicate your desire to inventory your dies at Flex Finishing or your request to have them returned.
- **Dummy/Proof/Blueline**
 - a) Send a dummy/proof/blueline with each job to be finished.
 - b) Show pagination, binding edge location and finished trim size details, at a minimum.
 - c) Match the specifications detailed in the purchase order with the dummy/proof/blueline.