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PRINTtips



Graphics

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Mailing

Under One Roof

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Consider the End First... Allowing for Bindery Functions

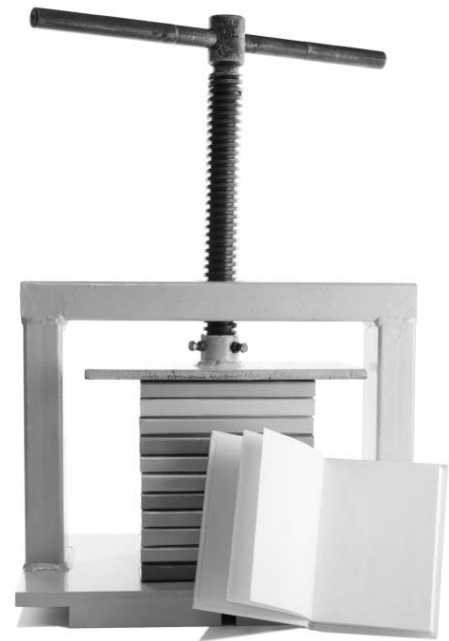
Are you familiar with the term *bindery*? That's the department in our company where we create the final product from flat press sheets – products like a folded brochure, a booklet, a pad, a numbered invoice, pages with holes ready for a ring binder, a spiral bound manual, or a ticket with perforations to make a tear-off stub. The bindery is where we trim business cards to final size and trim the edges of booklets to make them even. It's where we apply the glue that makes individual sheets carbonless paper into a set. It's where we package the order and do the final quality control check. So even though we rarely mention the bindery when talking to you about a project, it is a very important part of the printing process.

Bindery operations

If you have ever cut, folded, stapled or punched holes in sheets you've printed, then you are familiar with bindery operations. We perform these operations using stand alone equipment for sheets printed on our offset presses, and with add-on modules to our digital printing equipment to collate multi-page documents, staple sets, and even make booklets. Having these inline capabilities adds a level of efficiency that can mean a faster turnaround time for your job.

Allowing for bindery operations when creating documents

You will get the best results for your project if you understand that some bindery functions require an adjustment to the layout of the document file. The three most common are allowances for



trimming, folding and document binding.

Trimming

If your document contains a *bleed* – an image or line or solid color that extends all the way to the edge of the sheet – the layout will need adjusting. This is because we can't print an image to the edge of the sheet. What looks like printing to the edge is really a printed image that has been extended past the final size, then trimmed to the final size. The standard allowance for a bleed is 1/8 inch (0.125) beyond the finished size. So if the final size of your printed product is 8.5 x 11, then set the document size at 8.75 x 11.25, set trim marks at 8.5 x 11, and extend the image that will bleed .125 inches past the trim lines.

Consider the End First (cont)

“... a trifold brochure, remember that the size of panels that fold in must be slightly smaller...”

“When you are setting the margins for an item that will be drilled or punched, you must allow extra space...”

“The instructions we’ve given to adjust for trimming, folding and mechanical binding are standards in the printing industry...”

When preparing a file for an item such as a business card where more than one can fit on a press sheet, then include trim marks that show us what you intend for the final size. Depending on what is being printed, we may prefer to have just one image with trim marks rather than several images on the sheet. The process of positioning images to print on the press sheet is called *imposition*; we may want to determine the imposition plan ourselves based on production considerations.

Folding

When you are preparing a document like a trifold brochure, remember that the size of panels that fold in must be slightly smaller to produce a completely flat and even fold. The adjustment is particularly critical when the image from one panel abuts the image from an adjacent panel. To compute the adjustment mathematically, determine the width of single panel if all were the same size, reduce the width of the panel that folds in by at least 1/8th inch (or more, depending on the thickness of the paper being used for the job), divide by two and add that amount to each of the outside panels. Here’s an example:

8.5 x 11 sheet of paper folded in thirds to produce a brochure measuring 8.5 x 3.67 after folding.

- 11 divided by 3 = 3.667 - the width of a panel if all were equal
- To determine the width of the inner panel, subtract 0.125 (1/8th inch) from 3.667 = 3.542
- To determine the width of the outer panels, divide 0.125 by 2 = 0.063. Add this amount to 3.667 = 3.73
- Result: the panel that folds in (the inner panel) has a width = 3.542; the two outer panels have a width of 3.73

Remember that the position of the inside panel changes from the front to the reverse. In the example above, the inner panel moves from the left to the right depending on whether you are

working on the outside or inside of the finished brochure. To see this easily, fold an 8.5 x 11 sheet of paper in thirds, make a mark on both sides of the inner panel, then unfold.

Drilling/Punching

To put holes in paper, we may use a spindle drill (similar to a wood drill) or a punch (in line on the digital printer or for mechanical binding such as plastic comb or coil). When you are setting the margins for an item that will be drilled or punched, you must allow extra space from the edge of the sheet to where the image begins to accommodate the drill or punch pattern. A half inch clear space is recommended for an 8.5 x 11 sheet, so shift the margin to the right for one-sided pages. For two-sided pages, shift right for odd-numbered and left for even-numbered pages.

Bookletmaking

Booklets consisting of more than two or three flat press sheets before being made into the booklet can present a problem known as *shingling* or *page creep*. To illustrate page creep, fold ten sheets of paper in half. Gather them into a booklet and examine the booklet’s outer right hand edge. Notice that the pages are uneven (shingled). This is the result of page creep. To eliminate the unevenness, the final step in making a booklet is to trim the face (*i.e.* the outer right hand edge). If there has not been an adjustment for page creep, it is possible that text, page numbers, or other images may be trimmed away during the face trim.

Making exact adjustments for page creep requires complicated mathematical computations. A less accurate though simpler method is to make a dummy booklet: fold the exact number of press sheets that will make up the booklet, gather them into a booklet and stitch (staple) in the center fold. Make the face trim, then disassemble the booklet. Measure the width of the inner-most sheet (the one that will have the center spread) and set page margins accordingly.

Consider the End First (cont)

Do it yourself or ask us for help

The instructions we've given to adjust for trimming, folding and mechanical binding are standards in the printing industry, so they are worth learning. However, if the software program you are using doesn't have the tools to make the adjustments easily, then we suggest you let us do it for you. Give us a Word file with text, tell us

where you would like photos or graphics placed, and let us do the final layout. The cost is small compared to what you'll save yourself in time and frustration.

For more information or a cost estimate, contact us at 513-248-2121

Q. What is the best way to bind a booklet or manual?

A. There is no best way, as each binding method has its own strengths and drawbacks. Here is a brief summary:

Saddle stitching/saddle binding: applying one or more staples on the fold. Printers distinguish between *stapling* and *stitching*. A stitching machine forms a staple from a length of wire that can be adjusted depending on the number of sheets in the booklet. A staple is a fixed length and therefore has a maximum number of pages that can be stapled. Saddle stitched books and manuals will lie flat. Once stitched, no additional pages can be added. A stitched booklet requires an allowance for shingling/page creep.

Comb binding: inserting coiled plastic "fingers" attached to a length of plastic that acts as a spine. Because holes for the "fingers" must be punched at about 3/8 inches from the binding edge of the sheet, it is best to keep that area clear of all text

and diagrams. Comb bound books and manuals will lie flat. Comb binding can be removed so additional pages can be added, but this requires a special punch and comb binding machine.

Spiral binding: similar to comb binding except the binding device is a length of coiled wire or plastic threaded through holes drilled on the binding side of the sheet. Spiral bound books will lie flat when opened, the spiral can be removed and rebound, and text must be a minimum of 3/8" from the bound edge of the sheet/page.

Wire-o: a continuous double series of wire loops that are threaded through punched slots at the binding edge. Wire-o binding will lay flat and requires 3/8 inch from the binding edge to be clear of all text. Generally speaking, wire-o cannot be removed and rebound.

Side stitch and tape: assembled pages are stapled at the side with the staples running parallel to the edge. Then tape is applied over the staples on both sides of the manual. Tape binding does not lie flat and the cover image must be adjusted so no part will be covered by the tape.

Perfect Binding: a method of gluing the edges of pages to a spine. Pages cannot be torn out and no pages can be added after a perfect bind. Does not lie flat. There is a minimum and maximum number of pages that can be perfect bound.

"Once stitched, no additional pages can be added."

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“The cover of your document – the first thing the reader sees – is a very important part of the finished product.”

Protecting The Cover

The cover of your document – the first thing the reader sees – is a very important part of the finished product. To safeguard the cover from scuffing and wear, consider these means of protection:

- *Coating.* Coatings are applied after printing as a protective layer. Some commonly-used coatings are varnish, aqueous, and UV coating. Coatings can be applied to one or both sides of the cover.

- *Overlay.* Use a clear plastic sheet over the top of the cover. The sheet will normally only be necessary over the front cover where the most protection is needed.
- *Die cutting:* instead of printing on the cover, cut a window through which text on the title page will show through. This technique also increases the range of stocks you can consider for the cover since it won't have to feed through a copier, digital printer, or press.