

June 2003

PRINTtips

Can Your Documents Pass the Bindery Test?



MacMillan Graphics, Ltd.

Park 50 TechCenter
2002 Ford Circle
Milford, OH 45150

(513) 248-2121

Fax (513) 248-5141

Web site:

www.macgra.com

FTP site:

[ftp.macgra.com](ftp://macgra.com)

Email:

info@macgra.com

Inside

Idea Corner
Words

Tricks & Tips

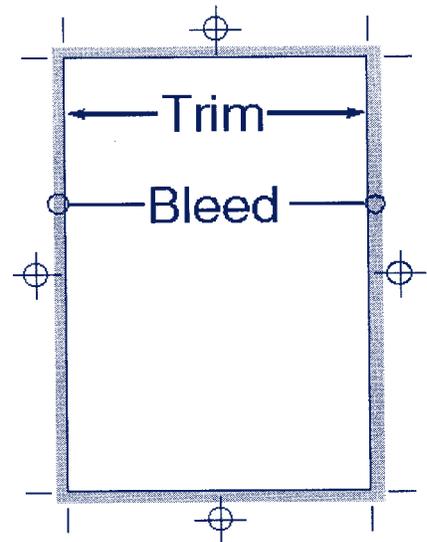
We've talked previously in Printips about the need to preflight the files you submit to us. You may remember that one of the things we check during preflight is whether the document is "bindery-worthy". By this we mean whether the layout of the document you are submitting has been constructed to account for such things as trimming, folding, drilling, or binding. Ultimately your layout must allow for the effects of these functions or the look of the finished piece will be compromised, no matter how well it is printed.

Cutting and Trimming

One important piece of bindery equipment is our power cutter, equipped with hydraulic clamps and guillotine blade that produces a precision cut. We use the cutter to cut parent sheets to press sheet size, and also to trim away extra paper.

If your job contains a bleed or if we are printing several items on one sheet (like business cards), we will print your job on paper that is slightly larger than the size of the finished piece, then trim to the exact finished size.

When you are setting up the job, it is important that you include trim marks that indicate these exact measurements. In addition, where there is a bleed, you must extend the image to be printed by one-eighth inch (.125) beyond the trim size. For example, if the final size of the item is 8.5x11, then build your document at



8.75 x 11.25. Draw guides on your layout that are .125 inches from the edge all the way around (even if you are only bleeding on one edge). Now create your design, using the guides to remind you where the image will end, and extending the images .125 inches past the guidelines.

Folding and Scoring

When you are designing anything that folds, remember that panel sizes will not be equal after folding. This is because the panels must accommodate the thickness of the paper and the score. (A score is a crease in the paper that allows the sheet to be folded without cracking.) Scoring is recommended whenever the thickness of the sheet exceeds .005 inches. Ask us if you are not sure whether a score is required.

When adjusting panel sizes for folding and scoring, make the inner panels slightly smaller, then add back half the amount you subtracted from the inner panel to each of the outer panels.

Can Your Documents Pass the Bindery Test?(Continued)

“When you are designing anything that folds, remember that panel sizes will not be equal after folding.”

“... the position of the inside panel changes when you turn the brochure over.”

For example, consider a brochure with a finished size of 8.5 x 11, folded in thirds. If all three panels were equal, each would measure 3.667 inches. However, we must adjust for the panel that will be inside the brochure after it is folded (labeled inside on the diagram). Subtract .126 inches (about one-eighth of an inch) from the inside panel so it now measures 3.541 inches. Divide what you subtracted in half (.063 inches) and add this to both the front and back panels. They now measure 3.728 inches. Remember that the position of the inside panel changes when you turn the brochure over. In the example, the inside panel is on the left side when you are working on the outside front and back, but moves to the right side when you work on the second side of the front and back.

There are many kinds of folds that can be made from a single sheet of paper. The most common ones we encounter are a four-page or six-page, shown below. The six-page fold has inside panels that will need to be adjusted.

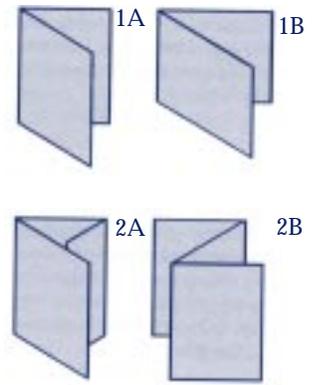
Drilling and Punching

Drilling is the term printers use for the process of putting holes in paper, and we actually do use a machine very similar to a wood drill for the process. A lift of paper behaves much like a block of wood, so to produce even, clean holes, the paper must be cut using a spindle motion.

Punching refers to making holes for mechanical binding such as plastic combs or spirals.

It is very important to take the drill holes or punch pattern into account when setting up pages. Do not start copy so close to the edge of the sheet that the holes will pierce the copy. Shift copy to the

right to allow for drill holes. And if your text will be printed on both sides of the sheet, remember to shift right for odd-numbered pages but shift left for even-numbered pages.

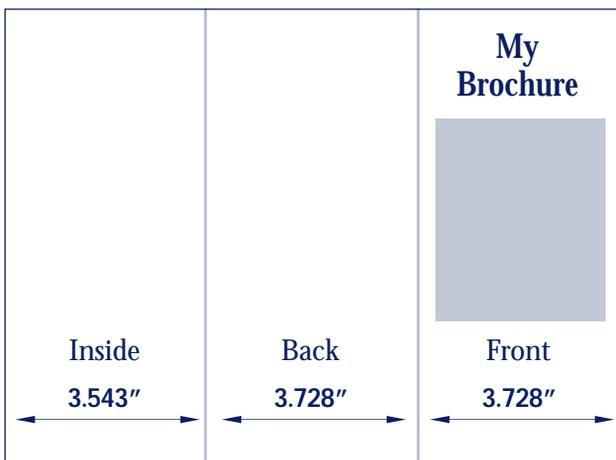


Signatures and Shingling (Page Creep)

If you wish to submit a print-ready file for printing a booklet, you will need to lay out your pages in signatures set up as printer spreads, and set the individual page margins to accommodate page creep.

A signature is a group of pages (also called a form) printed on both sides of a press sheet. You are probably most familiar with a four-page signature, in which a single sheet of paper is folded in half to yield four individual pages. Two four-page signatures can be gathered to form an eight-page book; three gathered signatures produces a twelve-page book, etc. When a booklet is built from four-page signatures, the final number of pages in the book must be divisible by four, since each press sheet yields four pages of the booklet. If you only have enough copy to fill seven pages, the eighth page will be blank.

Printer spread is the term given to a press-ready signature. Unlike a reader spread, a printer spread positions each page in the signature so it will appear in the proper location after the booklet is gathered and folded. The best way to determine a printer spread is to make a folding dummy of your booklet and gather the signatures. Beginning at the front of the booklet, number each page sequentially. When you take the signatures apart and unfold, you will have a diagram of the printer spread.



Can Your Documents Pass the Bindery Test?(Continued)

A characteristic of printer spreads is that all even-numbered pages are on the left and all odd-numbered pages are on the right. In addition, the sum of the page numbers on each side of the signature will equal the total number of pages in the booklet plus one.

A Final Word

If all this is too confusing, then we'll be happy to make the adjustments for you when you submit your file. Just remember to allow extra time in the production cycle and be prepared for some costs in prepress. Call us at (513)248-2121 if you have any questions.

Plan for Bindery Makeready

All bindery operations require a certain number of press sheets as setups or makeready. The more bindery functions a specific job requires, the more extra press sheets must be printed to allow for makeready in each operation. Please remember this when you are supplying your own paper for a job. Ask us for guidelines or better yet, let us specify the quantity before you place the paper order.

Of all the equipment in our shop, the bindery machines are the least accurate when it comes to holding a tolerance. Whereas our presses can register to 0.010 inch, our folder and cutter are limited to a tolerance of 1/32nd of an inch. In addition, our bindery equipment can't always be operated at speeds that match the press, in part because the tolerance limitations force the operator to slow down. This means we have to allow sufficient time for bindery.



“... bindery operations require a certain number of press sheets as setups or make-ready.”

A Vocabulary of the Graphic Arts

Bleed: ink reaching to the very edge of the paper.

Folding dummy: a piece of paper folded to finished size.

Collate: to assemble printed sheets or signatures in sequence for binding.

Gather: to collate folded sheets or signatures in sequence for binding.

Lift: a stack of paper to be cut, trimmed or drilled.

Makeready: sheets of printed paper used when setting up for bindery functions.

Offset or Set-off: ink transferred from the front of one sheet to the back of another. Can occur if a sheet is cut before the ink is completely dry.

Parent sheets: sheets of paper in the original, manufactured size. Parent size differs depending on the paper classification.

Press sheets: sheets of paper cut to the size that will be run on press.

Printer spread: a signature with pages assembled so they will be in correct sequence when the signature is folded, gathered, and bound.

Reader spread: a signature assembled so the page sequence is in logical order for a reader. Reader spreads are most commonly used for proofing.

Score: to crease a printed sheet so it folds easily and without cracking.

Words

“Parent size differs depending on the paper classification.”

Can Your Documents Pass the Bindery Test?



Park50 TechneCenter
2002 Ford Circle
Milford, OH 45150

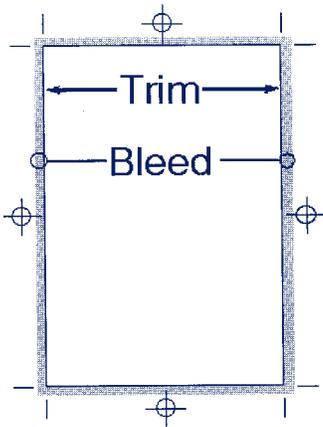
513-248-2121

Fax 513-248-5141

www.macgra.com
info@macgra.com

PRSR STD
US Postage
PAID
Permit #271
Milford, OH

Please Route to the Printing Buyer



TRICKS & tips

Make a folding dummy

The very best way to determine the panel size on your brochure or multi-page newsletter is to make a folding dummy – an actual mockup of the finished piece made from the paper it will be printed on. Here's what to do:

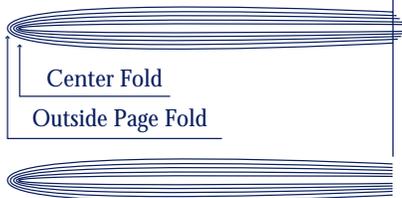
1. Ask us for several sheets of the paper we will be using to print your job, cut down to size.
2. Fold the sheet to the finished size.

It is best to make a folding dummy out of the actual paper that will be used, since the thickness of the paper can affect the page or panel measurements.

For a booklet containing more than two signatures, or being printed on thick paper, you will need to adjust the outer margins on each page to account for shingling or page creep. To illustrate page creep, fold 10 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 make the booklet edges even, we trim off the excess as the final step in bookletmaking. If you have not adjusted the margins of your pages to account for this final trim, the outside margins on each page will vary and we may even trim away part of the copy.

Compensate for creeping pages in a booklet layout by increasing margin size on center pages.



Creeping pages create smaller margins on center pages

Creeping pages trimmed to even edge

3. Unfold the sheet and measure the page or panel sizes.
4. Use the measurements of each page or panel to create a layout template.