

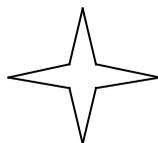
# ACME BOOKBINDING

PRESERVING THE PRINTED WORD



SINCE 1821

## Bindery Requirements



## Folding Impositions

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100 Cambridge Street

P.O. Box 290699

Charlestown, MA 02129-0212

tel (617) 242-1100,

fax (617) 242-3764

[www.acmebook.com](http://www.acmebook.com)

# ACME BOOKBINDING

## ***Bindery Requirements Folding Impositions***

***Please read the following information, circulate it to relevant personnel at your company and save it for future reference when you will be binding with Acme Bookbinding.***

***Not complying with the following requirements may result in additional charges***

## ***ENDPAPER***

- ✓ Endpaper needs to be the same size as folded, untrimmed signatures.

### **Remember**

- Paper grain must be parallel with the binding edge.
- Coated paper cannot be used as endpaper.
- Endpaper should be a minimum of 80# text weight.

## ***STRIPPING***

- ✓ Check folding impositions supplied by Acme Bookbinding prior to stripping. Please use one of our impositions or call our office before proceeding.
- ✓ Printed endpaper should bleed to the untrimmed signature size.
- ✓ Use stepped/numbered spine markers whenever possible to assist in proper signature collation.
- ✓ Allow minimum 1/4" trims on the head, foot and front. Trims should not exceed 3/4" on head, foot, and front.
- ✓ Trims exceeding 3/4" head, foot or front will result in an additional trimming charge.
- ✓ The untrimmed paper covers of Smyth sewn or perfect bound paperback books should be at least 1/8" taller (head to foot) than the untrimmed text.
- ✓ The untrimmed paper covers of Smyth sewn or perfect bound paperback books that will have ***endpapers glued solid to the cover*** should be at least 1/8" wider (binding edge to front) than the untrimmed text as well as 1/8" taller.
- ✓ Head margins on all forms must be exactly the same to ensure proper registration. This includes inserts that may be trimmed for tipping or wrapping as well as signatures and covers.
- ✓ All signatures (including covers) printed in multiples, that is two or three up, must have the same head and foot margins between books.
- ✓ All signatures for Smyth sewn books must be the same size. Uneven signature lengths will require pre-trimming at additional cost.
- ✓ There is ***Absolutely No Grind off allowance*** on Smyth sewn books.

## **STRIPPING**

- ✓ **Printed cover stock for hard bound books.** Allow 5/8" turn-in on all four sides when printing cover stock for hard cover binding. This cover allowance enables the bindery to turn the cover stock over the board onto the inside surface of the cover. Remember that the trim size of the book is smaller than the size of the cover. The bindery will make a binding dummy to ensure correct stripping once you supply us with necessary materials and information. **All paper cover stock must be film laminated -- for strength.**
- ✓ Be sure that crop marks and color bars will be removed by trimming and that signature marks will be hidden by folding and sewing. Leave all marks at least 1/8" (preferably 1/4") outside the final trim area. Call if you have any questions.
- ✓ Be sure to check with the bindery if you have any cross-over printing that may require a glue trap on 2-page or 4-page tips onto signatures. We are not responsible for alignment if we do not OK the width of or need for the glue trap.
- ✓ When printing books with bleeds that run into the binding margin, as with art or photography books, please leave 3/32" unprinted and unvarnished glue trap in the gutter between signatures. Without the glue trap, we cannot guarantee that our adhesives will penetrate into the paper fibers and that your book will be sufficiently strong.
- ✓ **Please Note:** Any book comprised of many 8-page signatures.
  - If you print on 100# text or heavier, we can sew 8-Page signatures.
  - If you print on paper lighter than 100# text, we must insert 8's to make 16-page signatures—before sewing.

## **STRIPPING**

- ✓ Placement of odd signatures.

2-page	Tip to outside of back (rather than front) of any signature <b><i>other than the last signature.</i></b>
4-page	Wrap any signature or tip to the outside of any signature
8-page	collate along with other signatures but <b><i>never place at the end of the book</i></b> as this will cause problems at sewing or perfect binding.

## **FOLDING**

- ✓ **Paper Cover Books** --- The maximum width (bind edge to fore edge) of an untrimmed folded signature is 12”.
- ✓ **Hard Cover Books** --- The maximum width of an untrimmed folded signature is 12-9/16” for books that will be Smyth-sewn on high-speed machinery. Books up to 15” wide can be sewn on hand-fed machinery.
- ✓ Fold corner to corner. Excess trim over 1/4" should be slit off at folding.
- ✓ DO NOT perforate spines when folding books that will be Smyth sewn. Head perforations must not break away easily. This can result in additional sewing costs. Leave as much paper as possible between perforations to enable automatic machine-fed sewing.
- ✓ **If in doubt have ACME fold for you.**

## **SPECIAL REQUIREMENTS / TIPS**

- ✓ You **Must** furnish a signed Purchase Order, complete with all details of your order for Acme Bookbinding to purchase materials, schedule and bind your book.
- ✓ If your job is **RUSH**, all materials must be ordered well in advance to ensure availability.
- ✓ You **Must** furnish rule up sheets for any forms, covers, endpaper or jackets to be cut.
- ✓ You **Must** furnish a complete set of fold-downs for folding and collating.

## ***SPECIAL REQUIREMENTS / TIPS***

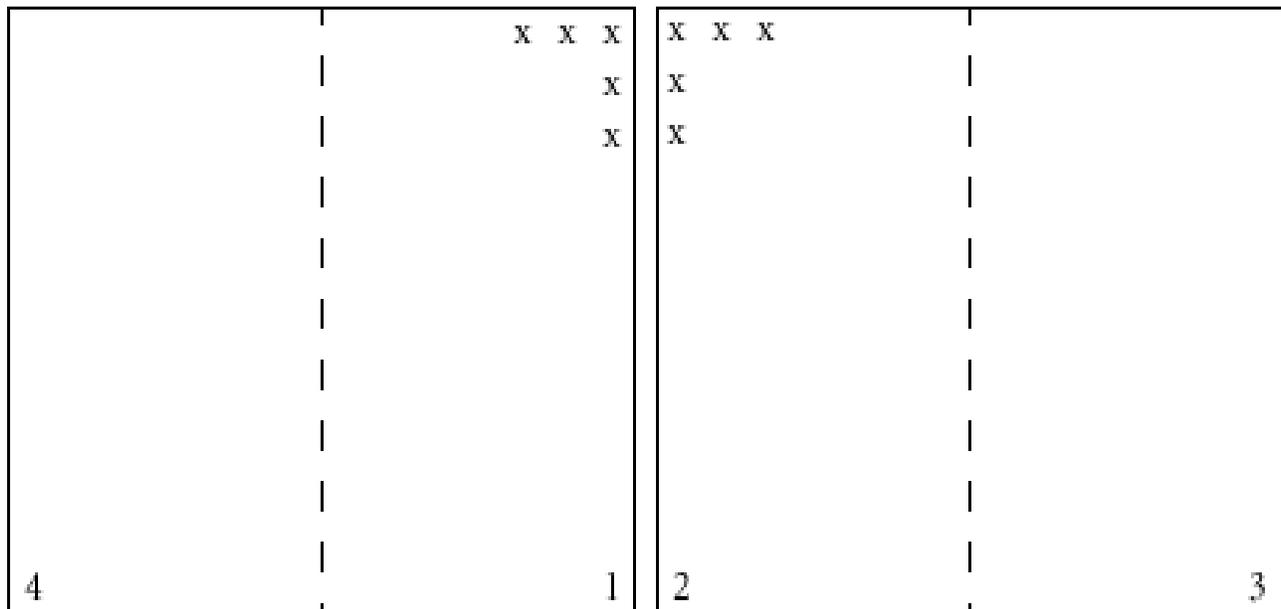
- ✓ Be sure that heavy ink coverage will not smudge in bindery operations such as folding, gathering, sewing, smashing and pressing. Spray varnish can alleviate many of these problems. Please ask if you have any doubts.
- ✓ Printed Dust Jackets should have protection such as lamination or press varnish to prevent marking during machine jacket application. Hand jacket application is more costly.
- ✓ Be certain that laminated film on paper jackets or paper covers does not extend beyond the edge of the printed sheet. Improperly laminated covers cannot be accurately trimmed.
- ✓ French fold jackets and other jobs that require scoring, must be OK'd by the bindery to assure proper fit.
- ✓ If you are supplying endpaper, printed covers and/or paper dust jackets, please allow ample overage. The bindery can repair most books that are damaged during set-up and yield more salable books if you supply enough of these materials.
- ✓ Cover stock can not have coating on the inside surface for paper back books.
- ✓ Gate folded covers must have 3/8" (minimum) foot trim on signatures and covers. Gate fold flaps must be at least 1-1/2" less (narrower) than the trim width of the finished book.
- ✓ Additional charges will be necessary if cross-grain cover stock or ink coverage necessitates off-line scoring of paper covers.
- ✓ We do not recommend coated text stock for perfect bound books.

## ***PACKING / SHIPPING***

- ✓ Skid Dimensions
  - Maximum Height .....48"
  - Maximum Width .....36" (This is the side the skid jack enters)
  - Maximum Length .....44"
- ✓ Please pack printed covers (for paperbacks or jackets) on separate skids.
- ✓ Pack 4-page and 8-page signatures that require cutting and/or folding on separate skids.
- ✓ Be sure that folded signatures are packed carefully so that gathering equipment and high-speed sewing machines can be used. Deformed signatures will require hand operations that are more expensive. Please call if you have any doubts.
- ✓ If more than one folded signature will be placed on the same skid, follow these instructions to enable machine gathering:
  - Use chip board or paper to clearly separate different signatures.
  - Only consecutive signatures can be placed on the same skid.
  - Different signatures must be stacked side by side rather than on top of one another.
- ✓ DO NOT double stack skids when shipping.
- ✓ 24-hour (or more) advance notice on shipments to Acme will ensure timely scheduling of your job.
- ✓ You **Must** furnish press counts and/or folding counts with your shipping documents.

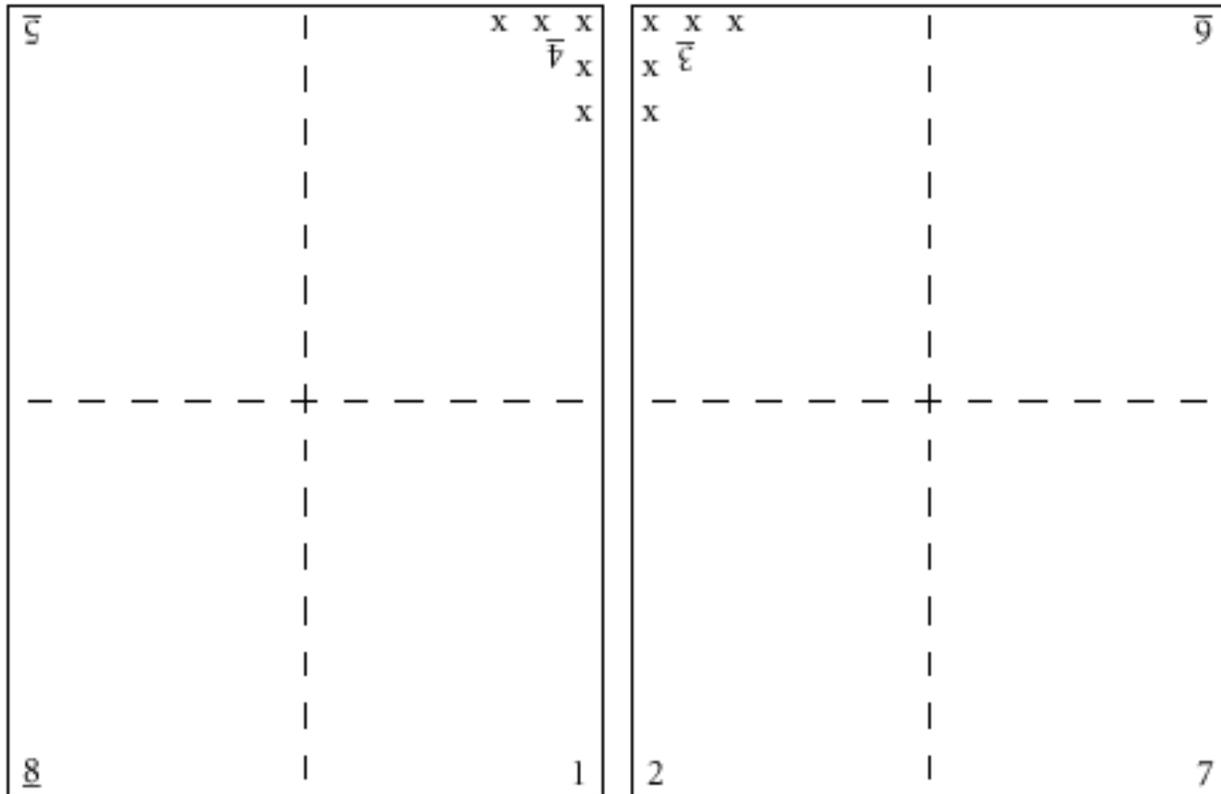
# Acme's Folding Impositions

## 4 - PAGE



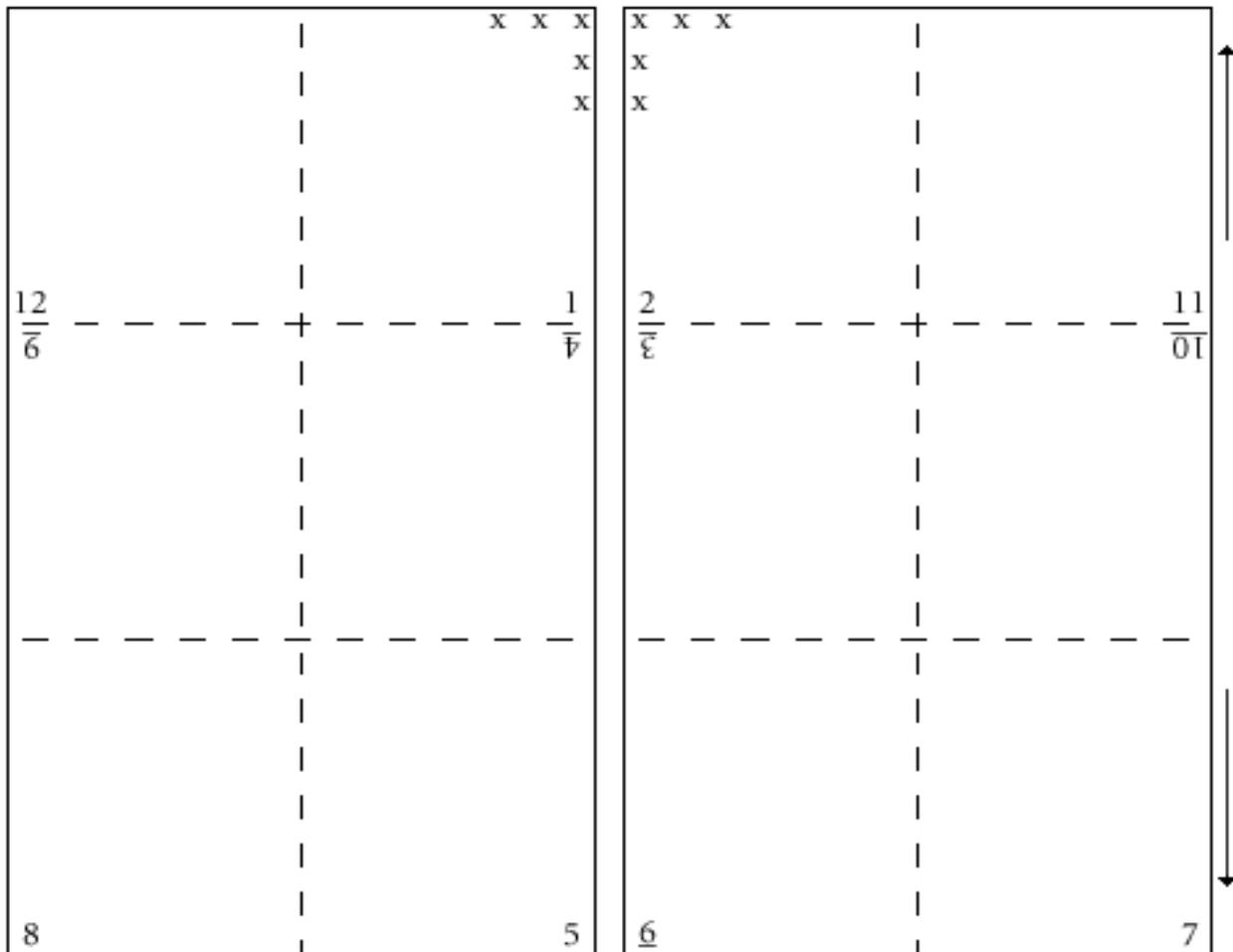
- ⇒ Do NOT perforate spines on Smyth sewn books.
- ⇒ Placement-----Strip to wrap any signature or tip to the outside of any signature
- ⇒ Minimum 1/4" head, foot and face trim required for Smyth sewn books.
- ⇒ NO grind-off allowance in gutter for Smyth sewn books.
- ⇒ 1/8" grind-off allowance in gutter for perfect bound books.

## 8 - PAGE



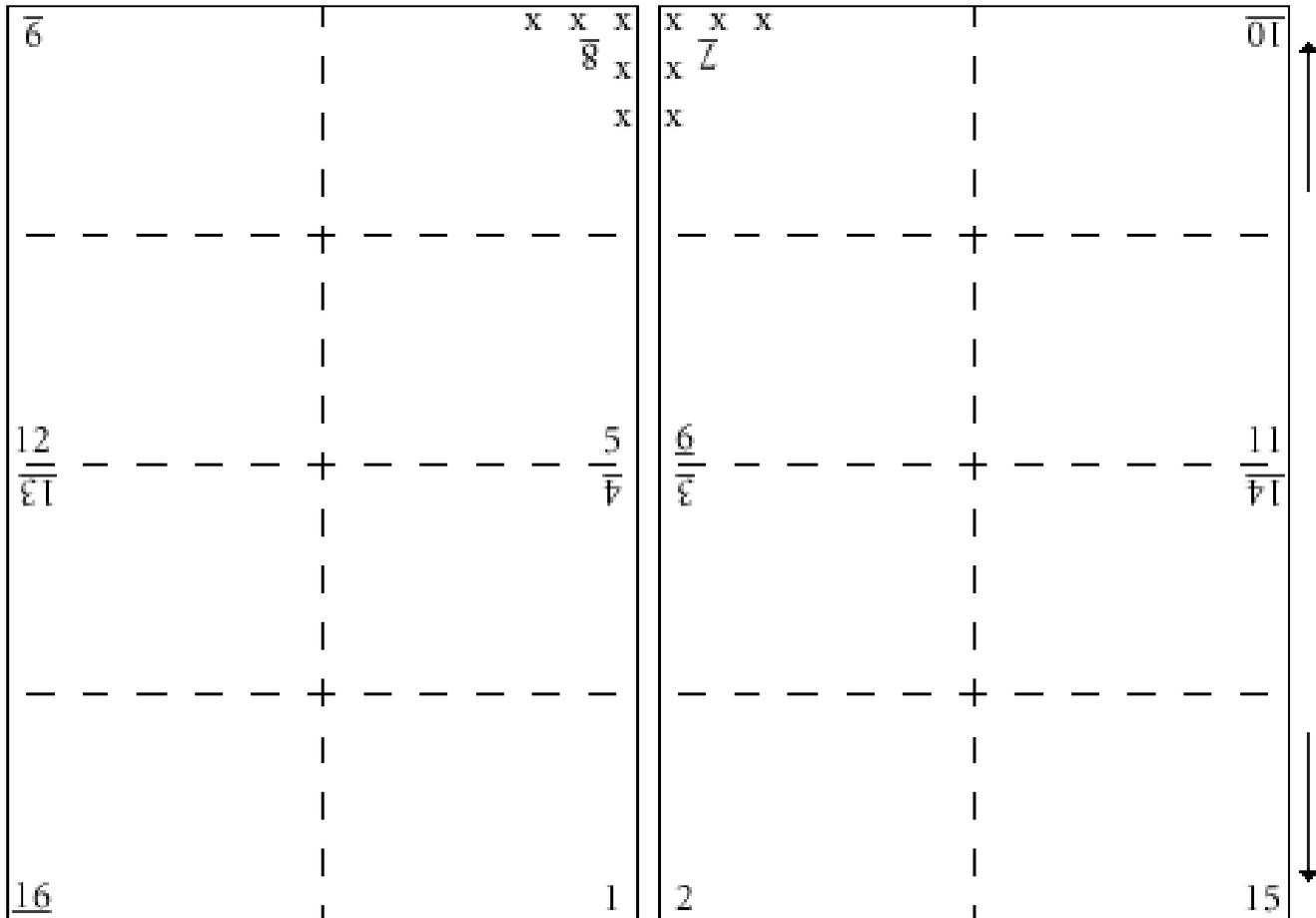
- ⇒ Do NOT perforate spines on Smyth sewn books.
- ⇒ Placement----Strip to collate along with other signatures but never place at the end of the book as this will cause problems at sewing or perfect binding.
- ⇒ Minimum 1/4" head, foot and face trim required for Smyth sewn books.
- ⇒ NO grind-off allowance in gutter for Smyth sewn books.
- ⇒ 1/8" grind-off allowance in gutter for perfect bound books.
- ⇒ If you print on 100# text or heavier, we can sew 8-Page signatures.
- ⇒ If you print on paper lighter than 100# text, we must insert 8's to make 16-page signatures—before sewing.

# 12 - PAGE



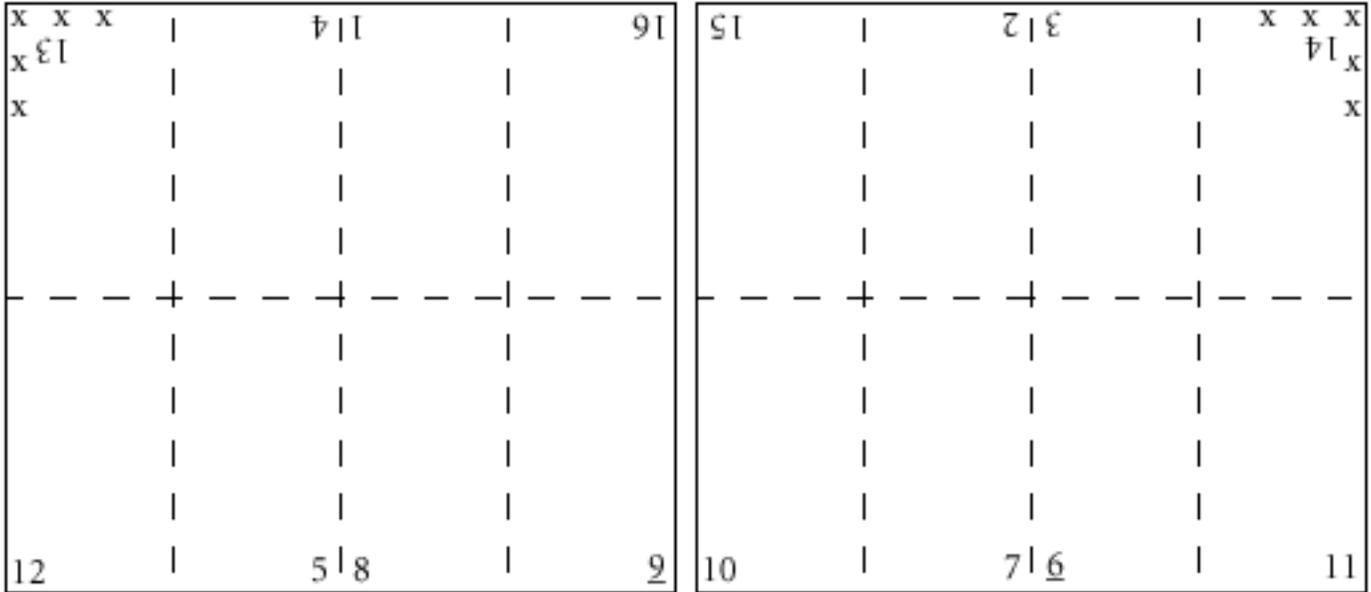
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- ⇒ 1/8" grind-off allowance in gutter for perfect bound books.
- ⇒ Arrows indicate the two panels that must be 1/16" smaller than and never larger than the inside panels. Without this allowance, the inside folds cannot be controlled.

# 16 - PAGE OBLONG



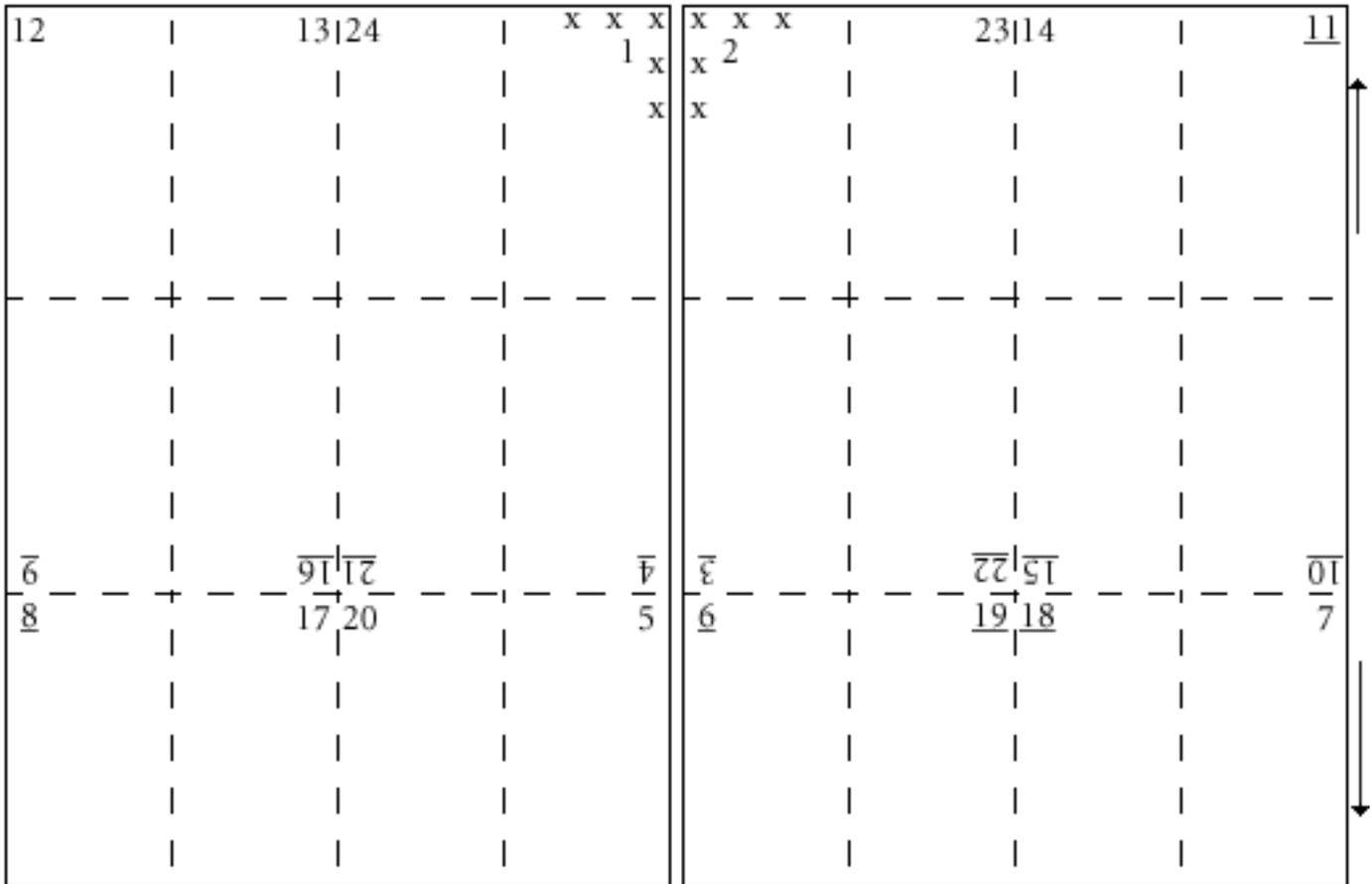
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## 16 - PAGE UPRIGHT



- ⇒ Do NOT perforate spines on Smyth sewn books.
- ⇒ Minimum 1/4" head, foot and face trim required for Smyth sewn books.
- ⇒ NO grind-off allowance in gutter for Smyth sewn books.
- ⇒ 1/8" grind-off allowance in gutter for perfect bound books.

# 24 - PAGE



- ⇒ Do NOT perforate spines on Smyth sewn books.
- ⇒ Minimum 1/4" head, foot and face trim required for Smyth sewn books.
- ⇒ NO grind-off allowance in gutter for Smyth sewn books.
- ⇒ 1/8" grind-off allowance in gutter for perfect bound books.
- ⇒ Arrows indicate the two panels that must be 1/16" smaller than and never larger than the inside panels. Without this allowance, the inside folds cannot be controlled.

# 32 - PAGE

29	4 5	x x x x 28 x x	x x x x 27 x x
20 17	13 12 9 16	21 24	22 23
32	1 8	25	26
30	6 3	11 14 15 10	19 18
31	7 2	31	31

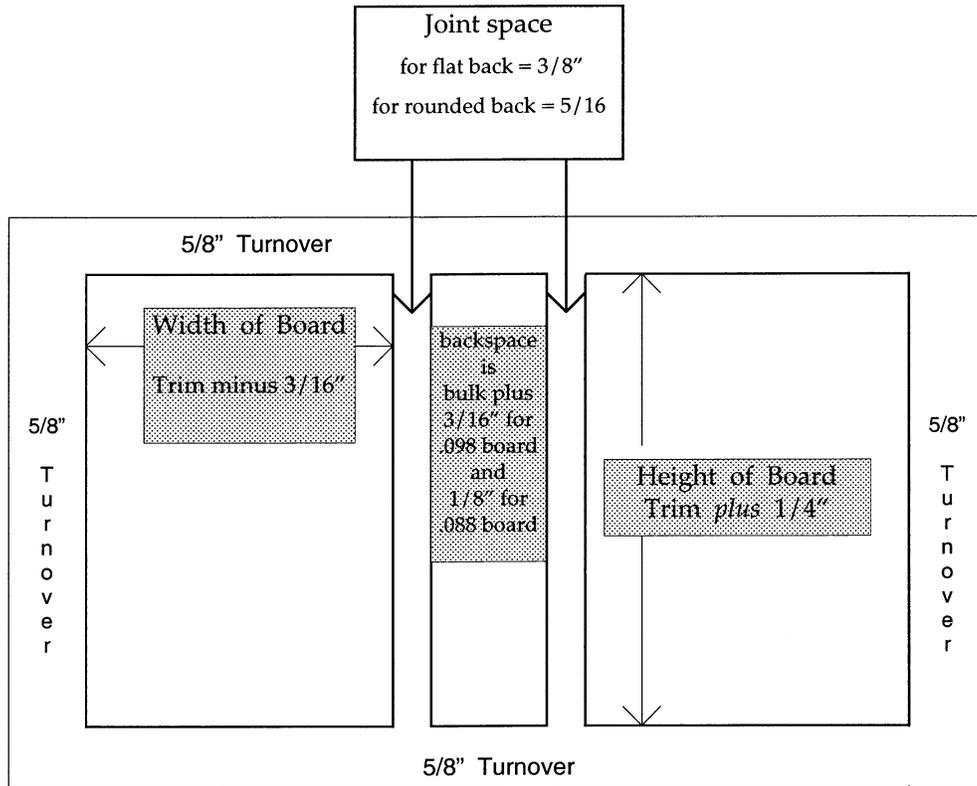
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# ACME BOOKBINDING

## Cover Material Dimension Chart for Preprinted Covers

Case Dimension Chart for: \_\_\_\_\_

Trim: \_\_\_\_\_ Bulk: \_\_\_\_\_ Spine: Flat or Rounded (circle one)



This chart is for determining mechanical specifications for the preparation of finished art for one piece preprinted covers for case bound books.

We recommend a using an 80# all purpose litho stock. If a coated stock is used, it should be only coated on the printed side.

To center text on the front cover or back cover, base the center of the text on the distance from the center of the back space to the center of the front or back board, minus 1/8 inch.  
 $(\text{back space}/2) + \text{joint space} + (\text{board width}/2) - 1/8"$

Printed covers should bleed into the turnover at least 5/16 of an inch.

Covers should be film laminated.

Cover material width is \_\_\_\_\_ (sum of boards, backspace, joints and turnovers)

Cover material height is \_\_\_\_\_ (trim plus 1-1/2 inches)

**For exact dimensions:**

**Please request a binding dummy made with actual paper from your job.**

# INSIDIOUS SOLVENTS

Binding ills brought on by ink solvent migration can be traced to quick-setting ink formulations and cold-set printing

**W**e carefully perfect-bound the enclosed sheet-fed offset printed annual reports. We tested the binding prior to delivery and it looked exceptionally good. Now, just six weeks later, our customer says the covers are falling off. Please try to shed light on this phenomenon.

The Rochester Institute of Technology (RIT) book-testing lab is familiar with such inquiries—this problem is a modern, yet unpredictable, phenomenon and is due to quick-setting inks and other circumstances, such as cold-set web offset printing.

Ink solvent migration difficulties were virtually unknown as long as printers used conventional inks at slow speeds. Due to increased press speeds, use of smooth coated papers and lack of an external drying mechanism, quick-setting inks became necessary for sheet-fed lithography. In general, these inks are designed for rapid initial setting so images resist marking and setoff upon delivery and stacking down of the lift.

To understand this contemporary problem, printers need some knowledge about an adhesive's complex nature and how it interacts with the sub-

strate being adhered, coupled with the surface chemistries. Due to space limitations, it's impossible to fully explain the problem in this forum. Even chemists are hard pressed to

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*If chemists claim there is no such thing as ink-solvent migrations, how do they explain the brown stains on the spine*

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completely understand it. We have received rebuttals by RIT (Rochester, NY) and Graphic Arts Technical Foundation (Pittsburgh) chemists who claim there's no such thing as ink solvent migration. Yet, another well-known hot-melt chemist reports a \$1 million

court case exists because of such a problem.

The RIT book-testing laboratory has several examples of ink-solvent migration to demonstrate such potential problems to participants in our many industry seminars. If chemists claim there's no such thing as ink-solvent migrations, how do they explain the brown stains on the spine of the inside of a cover? They are clearly visible on a white cover stock that popped off a hot-melt binding.

Paper's internal and external structures are porous, relative to the amount of filler and other non-fibrous additives placed into the pulp slurry and the amount of coating or pigment applied to the surface, as well as subsequent machine finishing operations. Non-fibrous additives may include calcium carbonate, clay and titanium dioxide, among others. It's the relative openness and irregularities of the paper's z-dimension—a directional measure of the paper's caliper—and surface that allow ink and hot-melt adhesive to flow around paper fibers.

Hot-melt adhesives are thermoplastic compounds. The polymer—the product's main ingredient—provides

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By WERNER REBSAMEN  
Contributing editor and  
professor at Rochester  
Institute of Technology,  
Rochester, NY. School of  
Printing Management and  
Sciences

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*If in doubt,  
always test.  
Wrap the  
bound  
products  
airtight for  
at least two  
weeks in an  
impervious  
material*

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the "strength component," due in part to its high cohesive strength. However, commonly used polymers have too high a working viscosity to be satisfactorily applied to book blocks bound on a perfect-binding machine. Therefore, it's necessary—as with ink manufacture—to incorporate additives into the formulation.

Such additives alter the polymer's physical flow properties for a more efficient application. These additives include tackifiers to aid in the product's adhesion and wetting characteristics; plasticizers that add the necessary flexibility to the finished, bound product; fillers, which allow for more economical production; and stabilizers that help prevent premature aging due to exposure and improper running conditions.

Heat determines hot-melts' flow characteristics as it controls viscosity. It permits adhesive to flow as a liquid to the paper's surface irregularities since one molecule can "slide" past another. Viscosity control is perhaps the most critical factor when working with hot-melts.

Inks perform similar to hot-melt adhesives. They, too, must flow and take the shape of paper voids. Major components of a quick-set ink system include a desired pigment and vehicle. The vehicle is formulated to carry pigment and various modifiers prior to printing and subsequently bind them to the surface.

Natural and/or synthetic resins, drying and semi-drying oils—commonly linseed or tung oil and soy bean oil, respectively—as well as low-viscosity hydrocarbon solvents combine to form the quick-set vehicle. Other materials generally classified as modifiers include drying agents, wax compounds, lubricants, antioxidants, surfactants and anti-setoff pastes, among others.

The necessary introduction of solvents into a quick-setting vehicle system is accom-

plished with aliphatic solvents combined with up to 24 percent aromatic content, which boast a relatively high solvency power. These stronger solvents are useful since they reduce viscosity with little effect on tack rating and provide additional compatibility to the resin/oil portion of the vehicle system. This increased compatibility is characterized by the resin/oil being more soluble in the solvent.

Although the stronger solvent provides visible benefits to the printing condition, most hot-melts commonly used in the binding industry are susceptible to degradation by these components.

**T**here are many reasons why offset inks aren't compatible with contemporary hot-melts. Basically, no problems exist with inks used on heatset web offset presses. There, solvents can evaporate. Cold-set web offset is another story.

In a study at the renowned FOGRA (West Germany) research institute, researchers found that half of all solvents used on sheet-fed offset lithography printed works were still in a liquid phase three months after the job was printed. In repeated tests, researchers discovered sheets printed with heavy inks bleeding into the gutter and bound with conventional hot-melts initially passed all page-pull tests. But, six weeks later, damages were so severe pages came loose just in normal use. In addition, researchers found color change and softening within the hot-melt.

Another article in a German trade journal refers to expensive, hardcover-bound art books that left the bindery in good condition. Many months later, customers received these expensive books—which had been transformed into a set of beautifully printed sheets loose inside a hardcover case.

As with ghosting, such events aren't predictable. Too

many factors can influence such a potential disaster. The facts are that certain chemicals within inks are attracted to certain chemicals in the hot-melt. In time, such migration softens the hot-melt.

To prevent such disasters, printers/binders can take the following steps:

- If ink must bleed into the binding edge, strip it out at least 3/16 inch on each side of the fold. (This practice may not prevent solvent migration, but it gives the adhesive better holding power.)

- Specify a two-shot adhesive binding, the primer being a cold-emulsion PVA type; or have products/books bound only with PVA adhesive. PVAs are resistant to such migration.

- Specify PUR adhesive—these new, moisture-curing materials are the only ones resistant to such solvent migration.

- Store sheet-fed printing sheets/signatures with heavy ink coverage as long as possible before finishing to lower risks.

- If such risks exist, recommend Smyth sewing. However, be careful. Don't make the same mistake that a large trade binder did and glue-off these bookblocks with hot-melt. This binder experienced the same migration problems with his sewn hardcover-bound books. The hot-melt adhesive softened in time and left a split between each signature. The printer was happy to redo the order—at the binder's expense.

- If in doubt, always test. Wrap these bound products airtight for at least two weeks in an impervious material such as aluminum foil. Thereafter, check and compare page-pull testing results. If customers are in a hurry, tell them the potential problem exists and then bind only what they need for the next six weeks. If customers refuse, tell them in writing of a potential problem. ■