

PRINTtips

At The Finish Line: Binding Your Documents

After your manual, directory, booklet, catalog, magazine, newsletter, program, cookbook or other document has been printed, copied, imaged, lasered, ink jetted or reproduced by any other means, it is time to consider how to put all those pages together into an attractive and durable product. You may be surprised to learn how many options you have for *binding* – the name given to the process of gathering and securing all those pages.

Pamphlet binding

Pamphlet binding is a general term that refers to binding booklets, catalogs, magazines and similar products. It is distinguished from *bookbinding*.

There are five steps to pamphlet binding: scoring, folding, collating or gathering, stitching, cutting and trimming. Not every printed product requires all five steps. A printed brochure, for example, requires only trimming to size and folding, while a catalog may go through all five steps.

Scoring: A score is a crease made in the document cover to facilitate folding. Scoring may be done on press when the cover is being printed, on a

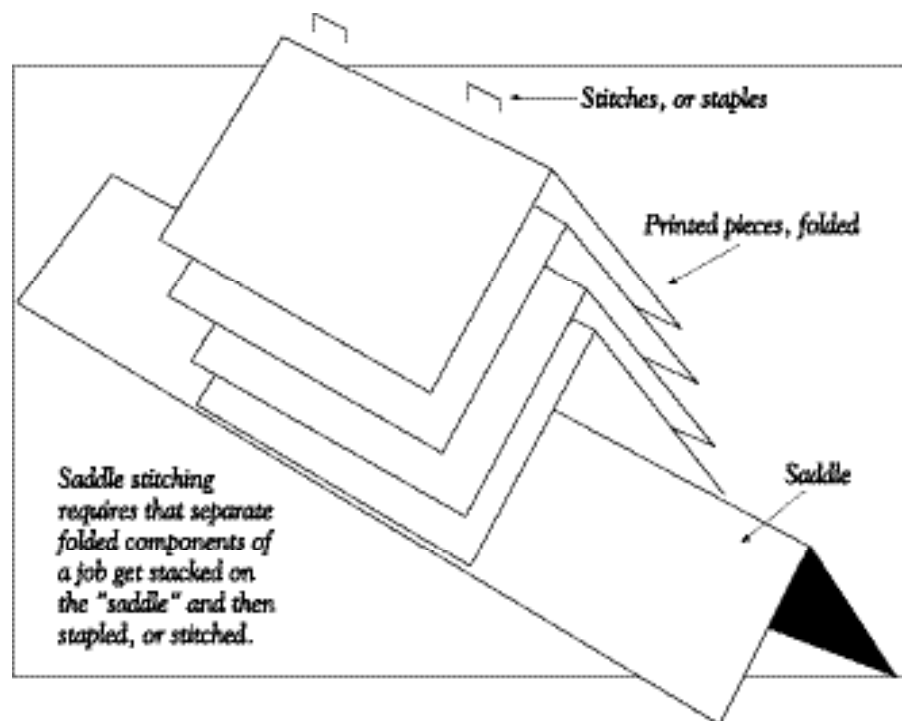
right-angle folder during folding, or on a scoring machine. Scoring breaks the fibers in the paper uniformly and creates an embossed ridge on the inside of the cover. This helps the cover accommodate the sheets in the booklet without putting a strain on the fold.

Folding: There are two kinds of folds: parallel and right angle. As the name implies, in a parallel fold, all folds are parallel to each other. Trifolding a brochure is an example of a parallel fold. A right angle fold is two or more folds that are at right angles to each

other. An example is a sheet measuring 11x17 inches folded in half to 8-1/2 x 11 inches, then folded again to 5-1/2 x 8-1/2 inches.

Collating or Gathering: Single sheets are collated; folded sheets are gathered. Collating can be done by hand or machine. Gathering can be done by hand or on a booklet-making machine.

Stitching: The simplest way to bind a document is *saddle stitching*. Saddle stitching looks like stapling. It requires that the pages of the document be

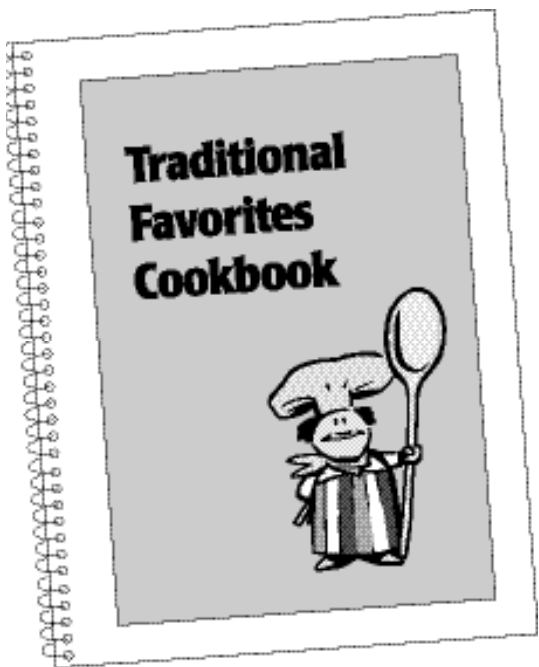


printed in *printer spreads* or *signatures*, folded, gathered over the saddle of a stitching machine, then stapled (stitched), usually in two locations.

Saddle stitching is a fast, inexpensive way to bind documents. It is easy to bind in a cover, and saddle stitched documents will lie flat when opened. The two drawbacks are the lack of a spine (on which the title of the document could be printed) and the number of sheets of paper that can be accommodated by the stitcher.

Cutting and Trimming: Guillotine cutters are used for *face trimming* – taking a single cut on the right hand edge of the printed product where it opens. Face trimming puts a smooth edge on the document. *Trimming* is usually done with three knives in a single cycle and trims all three edges of the document simultaneously.

We are able to perform all five binding operations.



This is an example of a plastic coil or spiral wire binding.

Bookbinding

The three most common ways to bind books are edition binding (sometimes called hardcover or case binding); perfect binding; and mechanical binding.

Edition binding: Edition binding produces the hardcover books we associate with permanence. The bookblocks of page signatures can be bound either by sewing or adhesive binding. Because edition binding requires specialized equipment, we do not offer edition binding as a service.

Perfect binding: Used most often for soft cover books and some magazines that have too many pages for saddle stitching, in perfect binding the sheets are held together by a flexible adhesive. Signatures are gathered, then the edge that will receive the adhesive is roughened by grinding off approximately 3/16". This exposes the paper fibers so they can be bound into the adhesive. Covers for perfect bound books are a single sheet that wraps around the entire book, just like hardbound books.

The limitations of a perfect bound book is that it may not lie flat and it must be a minimum thickness (usually 1/8th inch).

Mechanical binding is a catchall term for an alternative to saddle stitching. There are three different kinds of mechanical binds: plastic comb, plastic coil and spiral wire. Sometimes in the print shop we refer to these by their manufacturer's names –

GBC (General Binding Corporation) for plastic comb;

Plasticoil for plastic coil and Wire-O for spiral wire.

All three of these binding methods have the same requirements. The printed, single sheets are collated, jogged, and punched to create a series of holes with a defined shape and in a predetermined pattern. Then the binding device – plastic comb, plastic coil or spiral wire – is inserted into the holes and closed. Mechanical binding requires that an allowance be made in the gutter (the inner margin) of the document to allow for the punched holes.

The advantages of mechanical binding are that pages will lie flat. In addition, plastic coil and spiral wire allow the document to be folded completely back on itself. Like saddle stitching, mechanical binding makes it easy to add a cover. Plastic coil and spiral wire binding do not have a spine, but plastic combs can be imprinted (though it is not economical to do this except in very large quantities).

Other mechanical binding options include Velobind (snap-in plastic strips; good for 25 or fewer pages); thermal bind (a cover fitted with a hot glue strip on the spine; mimics perfect bind); and tape binding (a strip of wide paper tape applied during copying by a Docutech copier; allows document to lie flat).

Your choice of which binding system to use will depend on the nature of your document and how it will be used. We will be happy to advise you; call us and we will discuss your options.

A Bit of History

The term *stitching* comes from the first machines that were used to bind books in this way. The binding device was originally operated by hand, by one person, and was called a *stitcher*. The machine was approximately five feet tall and it could staple on either a flat or angled surface. The angled surface came in handy when a printed product had already been folded and had to be opened up to accept the staples. The angled device over which the folded pages were placed

soon came to be called a *saddle*. And because the term *stitching* was already in vogue, the whole process became known as *saddle stitching*.

The term *perfect binding* originated as a marketing tool of the Sheriden Company, a manufacturer that specialized in binding equipment. As the company was preparing to introduce a new machine that could produce a magazine or catalog with a square backbone, they had to decide what to call it.

To the people at the Sheriden Company, magazines produced on their new machine with the flat, square feel seemed much better than a stapled binding. It was great, they thought. They finally decided it was so good they would call the machine the Sheriden Perfect Binder. And thus was launched an industry term that is with us today.

a vocabulary of the graphic arts

Backbone: The back of a bound book connecting the covers; also called the spine.

Collating: The gathering of sheets and signatures.

Face Trim: To trim a book or other bound document on the right hand edge. Used to produce a smooth, finished edge.

Gathering: Assembling folded signatures in proper sequence.

Imposition: In image assembly, the positioning of pages on a signature so that after printing,

folding and cutting, the pages will appear in the proper sequence.

Jogging: To align sheets of paper in a compact pile. Orients each sheet the same way.

Plasticoil: Trade name for plastic coil mechanical binding.

Printer Spread: The layout of pages in a book or other document so that pages will be in correct order after gathering and binding.

Reader Spread: The layout of pages in a book or other document in reading order.

Shingling: In image assembly and layouts, the center or gutter margin that is adjusted according to the position of the page in the signature and the bulk of the paper.

Saddle Stitching: To bind a booklet by wiring it through the middle fold of the sheets.

Signature: In bindery, the name given to a printed sheet after it has been folded.

Wire-O: A trade name for spiral wire mechanical binding.

Protect the Cover

The cover of your document is a very important part of the finished product.

Covers tend to scuff and wear, especially when reproduced on a copier or laser printer. Consider some of these ways to safeguard your cover:

Print it. A cover printed on an offset press will be more resistant to wear than a copied cover, and you may be able to use a wider range of cover stocks than can be fed through a copier or laser printer.

Coat it. Covers that are being offset printed can have a coating of varnish added after the colors have been put down. Also consider lamination.

Overlay it. Ask us to bind in a clear plastic sheet over your cover to protect it. The sheet will normally only be necessary over the front cover where the most protection is required.

Die cut it. Instead of printing on the cover, have us die cut a window so

that the title page shows through and serves to identify the publication. This technique increases the range of stocks you can consider for the cover since it won't have to feed through a copier, laser printer or press.

Q. I often package my manuals in 3-ring binders, the kind that have a clear vinyl sleeve on the front of the binder into which I can slip a cover printed on a color copier.

After a few days against the vinyl, the toner from the cover sticks to the vinyl.

This also happens where the title page touches the vinyl on the inside front cover of the binder.

Why is this occurring?

A. You are observing the effect of *plasticizers* – the materials that make plastic flexible – rising to the surface of the vinyl. When this happens, the plasticizers soften the toner and cause it to adhere to the vinyl. The effect is more or less prominent depending on how much plasticizer is on the surface of the vinyl and how the toner was fused originally. Unfortunately, there is no action you can take to completely avoid this happening.