



La Fiesta Label & Packaging Systems

Shrink Sleeve Guide

Purpose of guide:
Understanding flexographic printing with a focus on shrink sleeves.

Created By:

Gary Starr

Graphics Director

Table of contents

About La Fiesta Label	3
Flexography	4
What is a Shrink Sleeve?	5
Substrates	6
Designing for Shrink Sleeves	
Software	6
Printing Specs	6
Art Specs	7
Key Lines/Pull Backs	8
Hard Lines/Drop Offs	9
Rethinking Color	10
Distortion Compensation	11
Cylindrical Containers	12
3D Scanning, Custom Shaped Containers	13
3D Proofs	13
Seaming	14
Case Study: Seam & Crease Placement	15
Understanding Templates	16

La Fiesta Label and Packaging Systems

Packaging for Today, Innovations for Tomorrow

La Fiesta Label and Packaging Systems was founded in 1985. With over a quarter of a century in business, La Fiesta has grown and evolved into one of the premier flexo printers in the southwest. Our corporate headquarters and production facility is located in Chandler, Arizona.

The products and services La Fiesta provides are used in diverse industries including beverage, nutraceuticals, material handling and consumer packaging products. La Fiesta Label and Packaging's reputation for quality, service and innovation are unmatched. We are committed to giving our customers graphics excellence and product solutions.

Contact info:

Customer Service Manager:

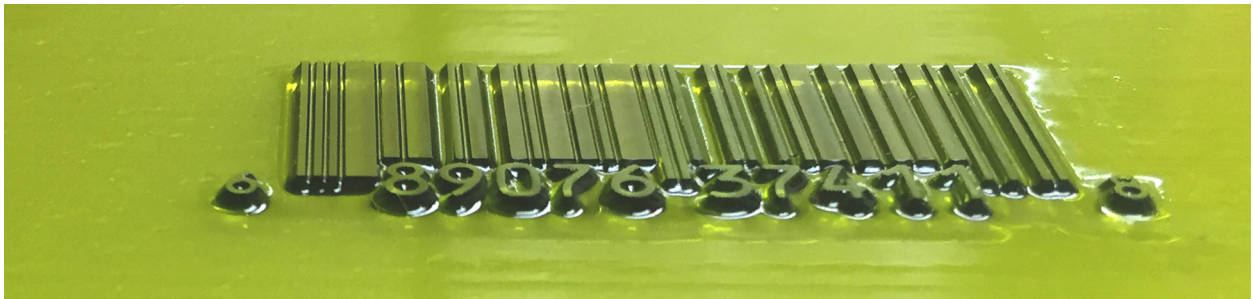
Karla Ramos
karla@lafiestalabel.com

480-785-3900

Flexography

Flexographic printing often abbreviated to Flexo, is a form of rotary printing which utilizes a flexible relief plate. Rotary printing means for every revolution of the printing plate cylinder, an image is produced. La Fiesta Labels polymer plates are all made with a digital platemaking process, which can print on almost any substrate ranging from 2mm films to 24pt board.

Flexographic printing plate relief shown below.



Flexo vs Digital

Often a project is quoted Flexo or Digital based on the quantities needed.

Advantages of Digital - High quality with quick turnaround time. Ideal for short run or prototyping. No dot gain, No trap lines and No plates needed.

Advantages of Flexo - Ideal for medium and large runs. Cheaper than digital and rotogravure with the ability to achieve high quality graphics with the use of spot colors, metallic and fluorescent inks.

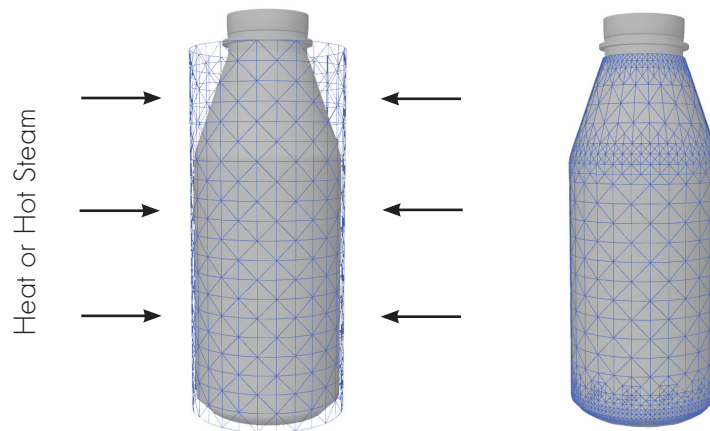
What is a Shrink Sleeve?

Next generation of packaging

Packaging is very important for a product, shrink sleeves will grab more attention than traditional labels or screen printed bottles. Shrink sleeves offers 360° graphics that conform to the shape of the bottle or container.



A shrink sleeve is reverse printed on a thin film. Reverse printing is a mirror image printed on the inside of the sleeve, with white printing last. The benefit is being scratch resistant, no need for lamination or a protective coating. This special formulated film shrinks horizontally when hot steam or heat is applied to it.



Shrink Sleeve Advantages

Tamper Evident • 360° Design • Shelf Appeal • Affordable Prototypes

Substrates

The film material used to create shrink sleeves is typically PETG or PVC.

PETG - (Polypropylene Terephthalate Glycol) PETG is the preferred choice of most of our clients because of its excellent quality, high shrink percentage and is recyclable.

PVC - (Polyvinyl Chloride) Easy to control and cost effective.

Designing for Shrink Sleeves

Software

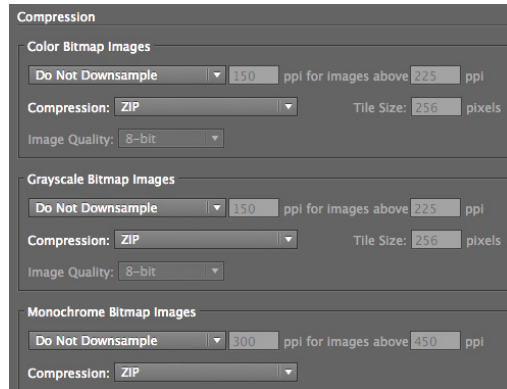
- Mac based.
- The latest Adobe CC.
- Adobe Illustrator is the preferred software.

Printing Specs

- 16" Web Width Capability
- 8 Color Capability - (7 + white)
 - (UV Inks)
- Line Screen 175
- Min Dot = 1%
- Trap .008in
- Min Line Weight .5pt
- Min Reverse Line .625
- Min Font Size - 4pt (San Serif)
- Min Reverse Font Size - 5pt (San Serif)
- ***Shrink sleeves do not require bleed**

Art Specs

* When saving **Do Not** compress your PDF.



Dialog box from Adobe Illustrator

** Please supply native layered art with print ready PDF.

- Note: Images should have continuous tone screen in each color to ensure no hard lines.
(**What are hard lines?** Pg.9)
- Vector art is preferred (Adobe Illustrator) with all linked graphics and fonts outlined.
- If there are large areas of solid color with similar color screens or gradients we may suggest separating them.
- To Avoid distortion and unscannable barcodes, barcodes should be positioned vertical. Shrink film is designed to shrink horizontally.



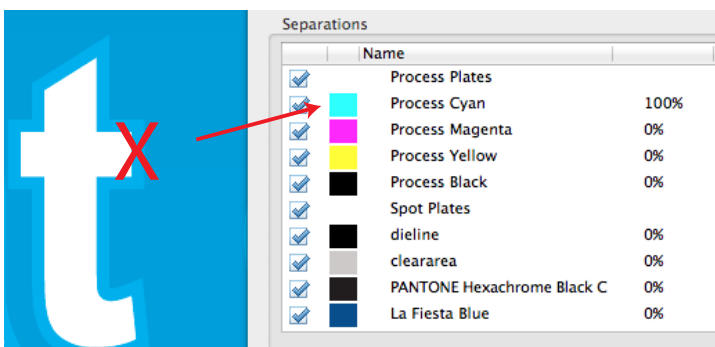
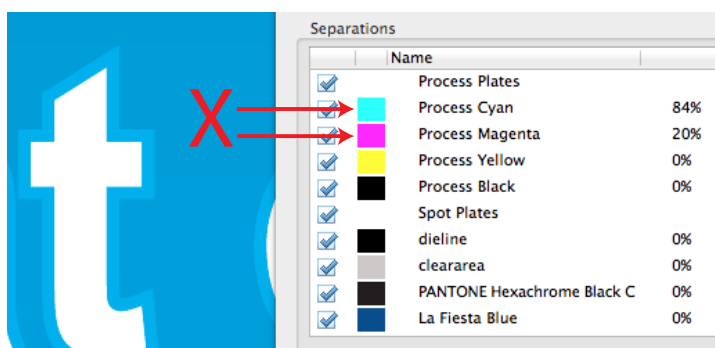
Key Lines and Pull Backs

Reverse text on process colors should have a one color key line or pull back.

A **key line** is usually consisting of black or another dark colored border. A key line is a boundary line that pulls back process colors for registration.



A **pull back** achieves the same results as a key line. Instead of adding a stroke it pulls back the process colors leaving one color. The graphic below shows a background made of cyan and magenta, the magenta is pulled back only leaving a stroke of cyan around the text.



Hard Lines/Drop Offs

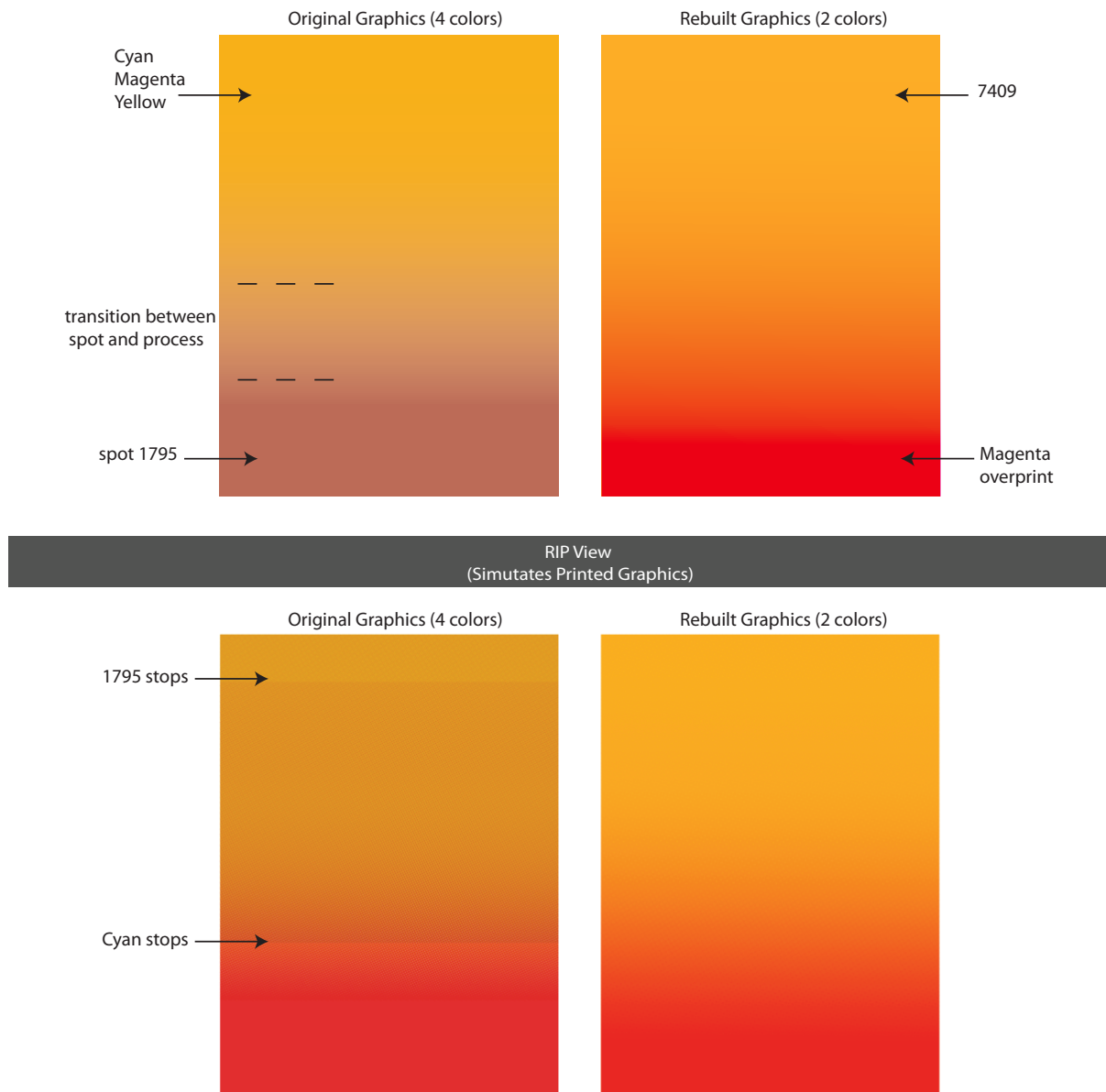
Minimum dot in graphics should be considered for images used in flexographic printing. Low screen values drop out unpredictably. **Proofing devices do not simulate hard edges.**



For more information on minimum dot and drop outs:
<http://www.flexoglobal.com/flexomag/08-September/flexomag-printcon.htm>

Rethinking Color - Flexo Printing

Sometimes designers need to think about color a little different for flexo printing. Below is an example that shows one solution for achieving a desired color. The original graphics had process colors blending to a spot color. This caused a few visual concerns: hardlines, poor color transition and muted color.



Distortion Compensation

Preparing art for shrink sleeves can be a little tricky, especially with bottles with high shrink areas. High shrink areas are bottles with drastic contours such as a bottle neck or bottle cap. As the film shrinks, the design can be seriously distorted, so artwork may need to be repositioned or compensated.

Compensating graphics can be seen in example below.

(3D graphic created from bottle line art, custom shaped bottles are scanned - see pages 12 & 13)

Original Graphics - (Uncompensated Art)



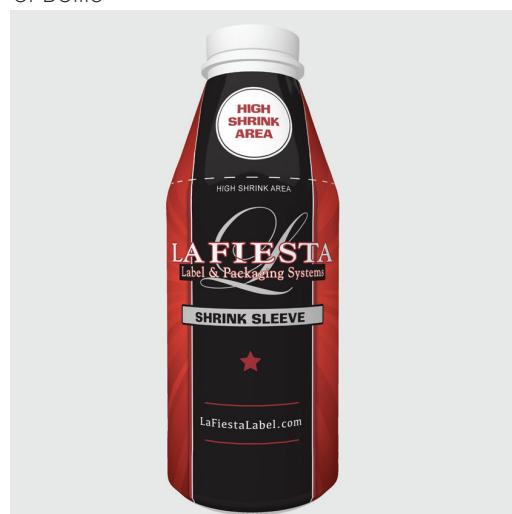
Graphics Distorted in High Shrink Area



Graphics Compensated for High Shrink Area.



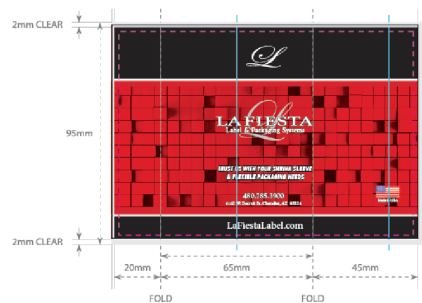
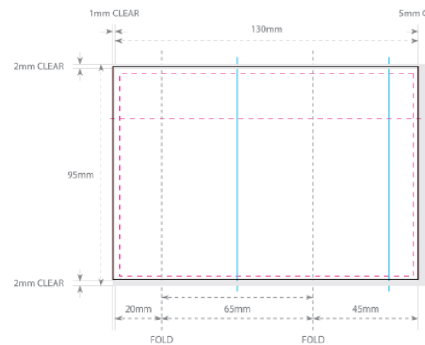
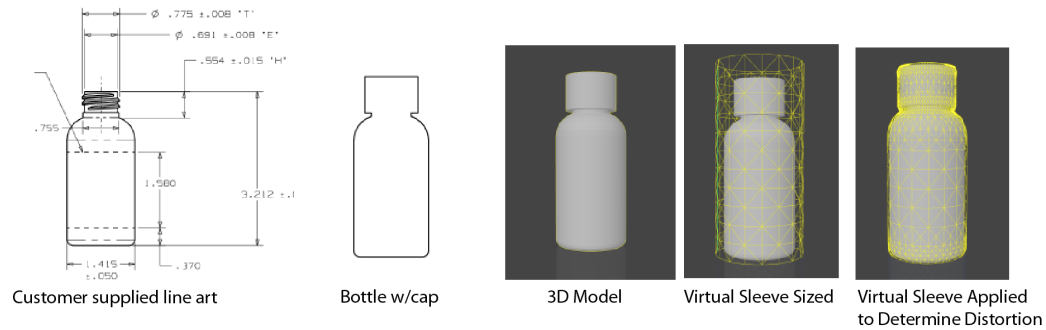
Graphics Correctly Conform to Contour of Bottle



Cylindrical Containers

Using the bottle line art to create a template and 3D model.

The graphic below represents the customer supplied, container line art to create a template and 3D model. Custom shaped containers (non cylindrical) must be scanned using a 3D scanner (page 13)



Graphics Added to Template



3D Proof

3D Scanning - Custom Shaped Containers

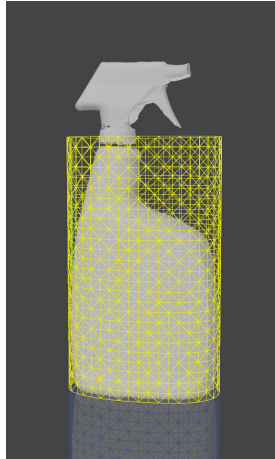
To find distortion rates for custom shaped bottles or containers, bottles are scanned using a 3D scanner.
- Custom shaped bottles are non cylindrical containers.



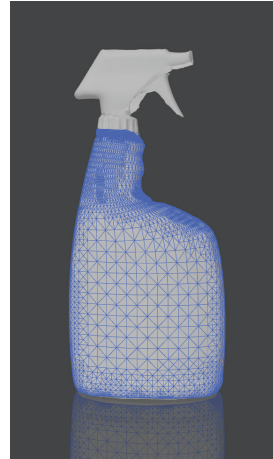
Bottle Scanned



Scans Merged



Virtual Sleeve Sized



Virtual Sleeve Applied
to Determine Distortion



3D Proof

3D Proofs

3D proofs or virtual proofs are more than just pictures, they are interactive! Virtual proofs gives you the ability to click and turn the graphics to see a 360° view.

The best part is that these virtual PDF's do not need any special software for viewing. Download the PDF below and open in Adobe Acrobat Reader (desktop version only).



[Download Virtual PDF PROOF](http://www.lafiestalabel.com/wp-content/uploads/2017/02/LaFiesta_3D-Proof.zip)

http://www.lafiestalabel.com/wp-content/uploads/2017/02/LaFiesta_3D-Proof.zip

Seaming

Seaming is one of the last steps in the creation of a shrink sleeve. It is the process of converting the flat material into a sleeve.

When using a supplied template (see page 16) you will notice 2mm clear on the left and 5mm on the right. (These may switch depending on the desired seam/crease position) These clear areas are for the seaming process, the 5mm clear will over lap the 2mm leaving a 5mm clear overlap (see graphic below).

Slit width - Total width of the sleeve before seaming.

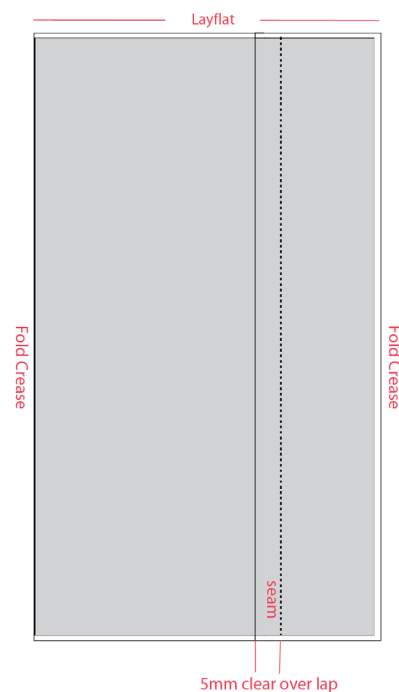
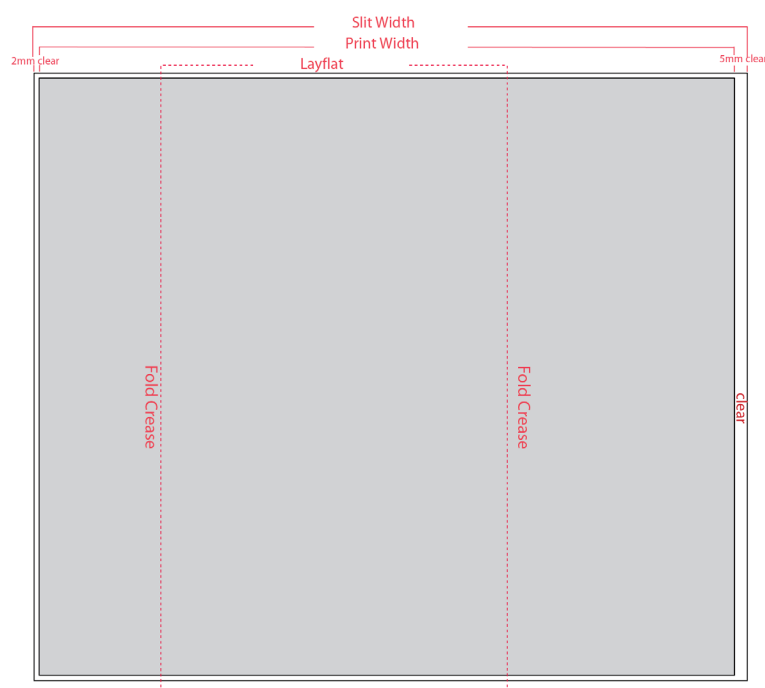
Print width - Total width of art box.

Layflat - Width of the finished seamed sleeve.

When designing a shrink sleeve the seam and crease must be considered.

Is the desired result a back or side seam?

Layflat and crease position go together and can also be critical, as they will determine the final placement of the seam, crease and optional T-perf.



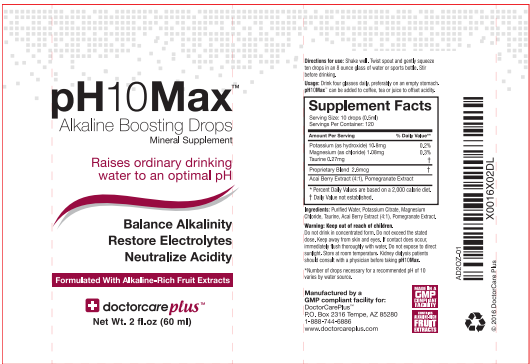
Case Study: PH10 Max

Focus on Seam and Crease Placement

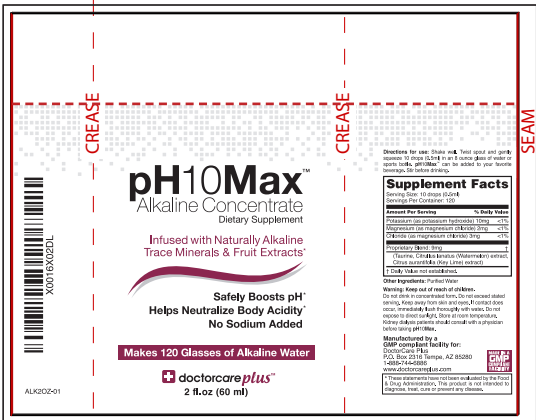


Seam and crease placement must be considered for custom shaped bottles. To avoid having to turn the sleeve during production this bottle will need to have the sleeve crease land on the narrow side of the bottle. Once crease placement is determined the seam placement can be considered and artwork adjusted.

(Note: Depending on the bottle and artwork seam may have to be considered before crease location)



Original Design

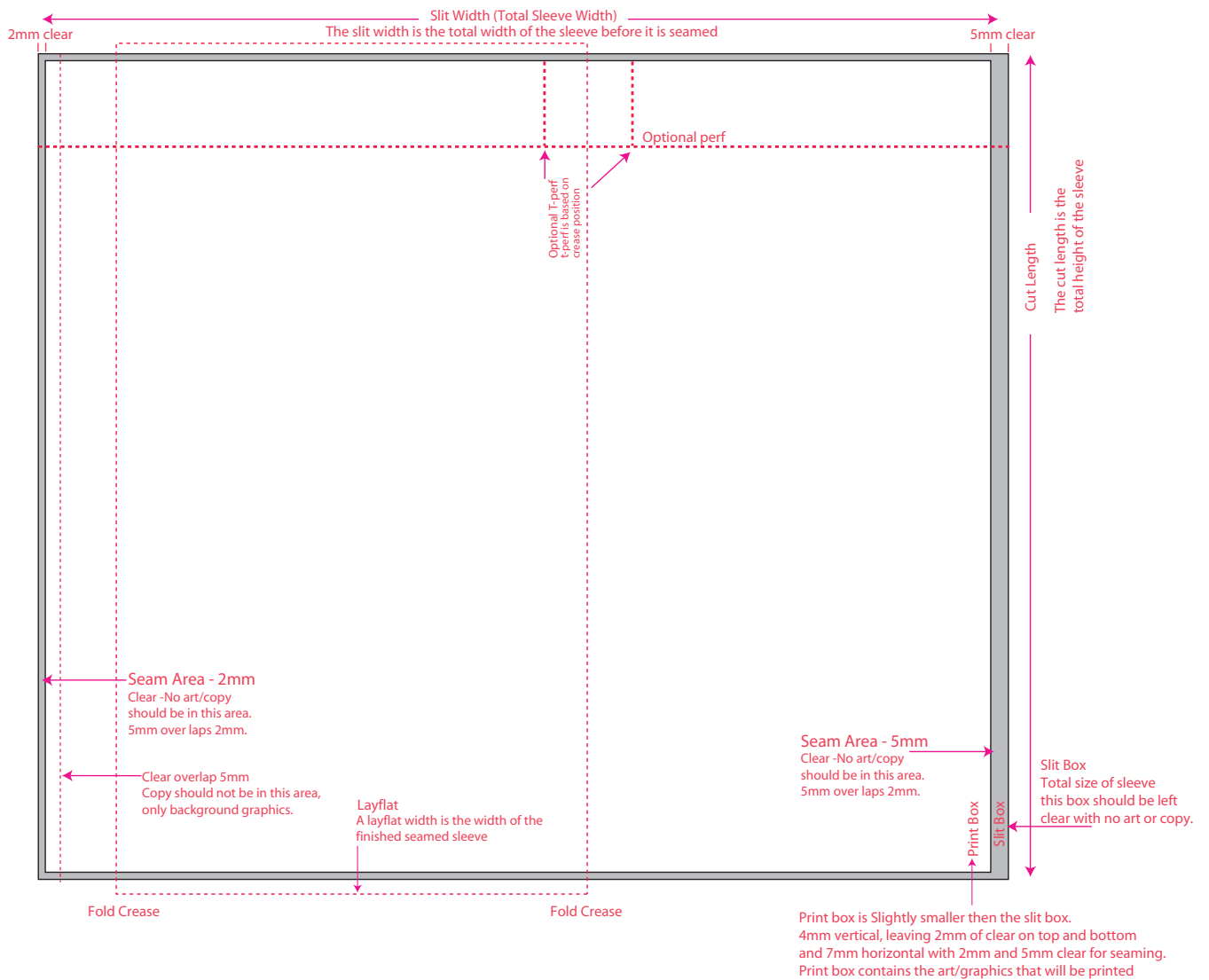


Artwork Repositioned for Seam and Crease Placement

(Perforation and tamper evident band added to design)

Templates

Understanding / Using Supplied Templates



* When designing a shrink sleeve, the seam and fold areas must be considered. The layflat position will determine the final placement of the seam, creases and optional T-perf.

