

WHAT IS FLEXOGRAPHIC PRINTING ?

At Trebnick, we primarily print our Tags and Labels via Flexographic printing, or Flexo for short. Using a Flexo press we can utilize up to 16 ink colors and print on a vast multitude of different materials or substrates.

HOW IT WORKS

Flexographic printing involves using **flexible relief plates** to transfer liquid **ink** to a material in rapid succession to print **text and graphics**. The thing that sets flexo apart from other printing methods is the adaptability it has to different materials and inks. A flexo press uses **cylinders** of various **gear tooth sizes**, that a corresponding sized plate is mounted to, in conjunction with other rollers and cylinders to complete a print.

PLATES & INK

Flexible relief plates are made of a **photopolymer** material and form a reversed impression of a design. When in use, the plate picks up one **ink** color and lays it down on the material. Combined with multiple other colors and plates, the **end result** is the whole design **printed** onto a tag or label. If there are 4 colors on the design for example, there will need to be 4 ink stations, 4 of the same size cylinder and 4 corresponding plates for each separation.

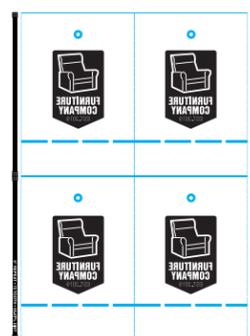
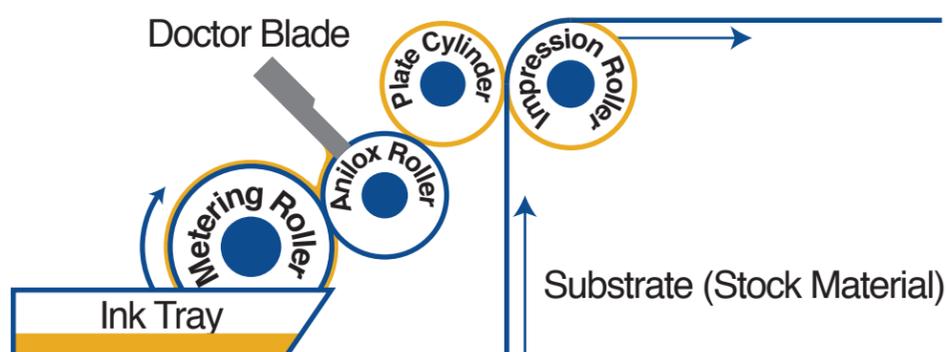
Some designs may involve different **shades** of the same color, such as black and gray. In that case, plate and ink cost can be reduced with use of **screens**. Screens on a plate can produce different **tints** of one ink color. Keep in mind though, that depending on your design and how accurate the color needs to be it may still require its own plate to print.

DIES & PERFS

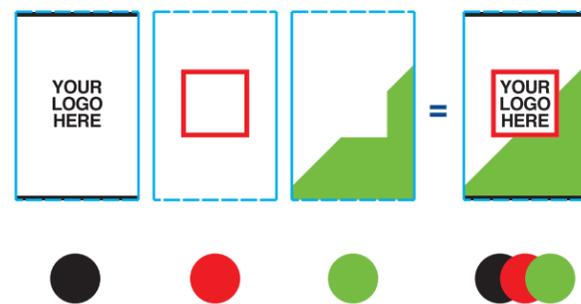
Last but not least, dies and perfs are what gives a tag or label its **size and shape**. Dies Function almost exactly how a plate does and rolls over the stock material, but instead of printing a design, it cuts a pattern to separate tags and give them size and shape. **Holes and C-punches** get punched out and perfs are added right before the finished product comes off the press to be sent to the customer.

There are **Solid Dies** that are integrated into a cylinder, and there are **Flex Dies**, that work like a plate and get wrapped onto a blank cylinder.

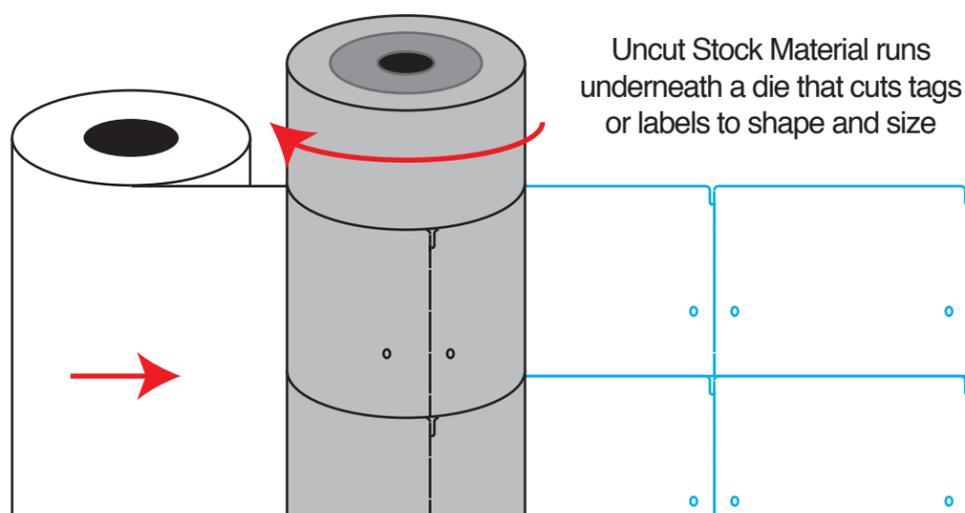
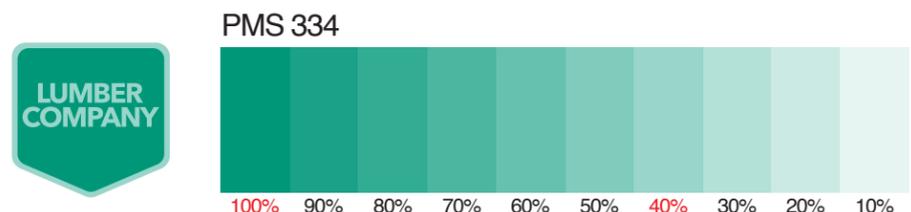
A Side View of a Flexo Press in Operation



A simple 2x2 plate file
1 Black Separation



A 3-color print would require 3 different plates
4 color = 4 plates, etc...



Uncut Stock Material runs underneath a die that cuts tags or labels to shape and size