pactiv evergreen™

Art Print Guidelines
Plastic – Dry Offset

Acceptable Formats

Art reference submitted should be in a compatible Adobe Illustrator vector format (.ai) file with the text outlined and no embedded files to meet the standard lead time. We do accept just about any art file as art reference to recreate with, however, this may delay the process.

Print Templates

Product print templates are available upon request, if a customer would like to size their art to the correct product.

Art Lead Time

Standard lead time is within 10 working days to send art out for approval as long as all designs information is available.

Colors

Use the Pantone formula guide for solid coated to match colors. Do not trap colors. Coated Pantone colors must be called out or we will match as close as possible.

Colors should be at least two Pantone colors apart (not consecutive) to give enough contrast to tell the difference while printing.

Type/Fonts

Include all necessary fonts when submitting artwork files or outline them first. Be sure all fonts have clean open letters, only use bold fonts for reverses, serif fonts may fill in. If fonts in Logos or fonts used in designs are not available we will replace them with the closest we have available. Additional letter spacing should be used on products that have type in the bottom sections of the cups.

- Positive type minimum: 6 point (depending on font)
- Reverse type minimum: 10 point (depending on font)

Lines

Avoid reverse rules at the bottom of the print area. Thin lines can easily fall off the print plates, please use the below values to insure they are fine. Designs with a large coverage areas may need these increased.

- Minimum positive line weight: .5 point (1/2)
- Minimum reverse line weight: 1 point

MTO Maximum Colors

Maximum number of colors are limited to 6 colors for MTO's.

Screen Tints/Gradients

Screen tints and gradients should not be used if possible. Images need to be supplied at a resolution no lower than 300 dpi at 100% size. Provide linked files do not embed them. We do not print full color process printing.

Bar Codes

Best results are having the bar code at 100% size in black and white inks with the bars being horizontal. Placement is the left side in the middle third area for best reproduction.

QR Codes

QR Codes should be no less than .75" square, 1/8" white ink are around the QR Code. These can also be just 1 color, but do not use red.

Inks

We use a semi-translucent dry-offset UV ink that is a standard in the industry. We match colors using the Pantone Formula Guide for Coated.

Colors should be solid spot colors that butt up to each other. Color blends or transparency effects should not be used and will be removed.

Metallic Inks

Metallic Inks should not be used in designs. The ink make up in not conducive to Dry Offset Printing. A standard color from the Pantone Formula Guide should be used instead. These inks viscosity is runnier and difficult to control, along with the metallic attributes hinder the drying process.

White Inks

White ink is considered a color, if it is not listed in your designs colors it is clear on paper proofs. We sometimes use a "for Placement color" or dark background to show white ink. White ink does not print under any colors.

No Print Gap

All MTO products have a no print gap area of 3/16" plus or minus 1/8".

Imprint Areas

Imprint areas are noted with a dotted line indicating the print area. Some restrictions may apply to severely tapered ribbed cups.

Fill Lines

Fill lines should be measured from the bottom of the cup only. There is a 1/16" up and down variation during production. Ideally, fill lines should be on the left side of the imprint areas.

Large Solid Areas

Large solid areas should not be used, especially bands of colors. The ink density will vary due to the amount of ink and the taper of the product which will produce an undesirable look. Bands of colors should be restricted to only 1 1/2" in height as a general rule. Smaller product may be more limited.

Printed Shapes or Objects

Vertical lines, circles, square or rectangles will be distort when printed following the contour of the cup. Objects will appear wider at the top and compressed on the bottom. Example: a circle will look egg shaped on the cup. This is due to the taper and considered normal.

Art Alterations

To assure a high quality final product, we may alter art not meeting our specifications.

Art Designs

The Graphics and Print departments reserve the right to decline producing any design it feels will obstruct producing a quality finished product.

Severe Tapers & Ribbed Cups

Designs are affected by the taper of the products, this is an inherent issue that is considered normal. Some Old Fashion (9OF) and ribbed cups should be considered only two sided so there can be at least 1/2" space between sides.

Distressed Logos

Distressed logo and text will fill in solid in most cases. These types of items use very thin reverses and thin lines to create a tattered look. This style of printing does not work well with our print process due to the large dot gain that is inherent. Thin lines may not hold on our print plates. If items are submitted in this manner, the results should be expected and considered acceptable.

Graphic Alignments

Inherent issues in the process can affect the alignment during production. Stripes going around may have the corners rounded to make designs more appealing. The lead edge may vary slightly from the trailing edge.

Dry Offset Printing Inherent Concerns

Dry Offset Printing has various inherent concerns, below is a summary for review. Please note our dry offset UV Inks are semi-translucent and Pantone colors listed on design will appear slightly faded on translucent or clear cups.

White ink will not print under any other colors. And a replacement color may be used to indicate white ink or the background as noted on designs. Tapered products are printed using a dry offset printing process. Common occurrences such as: blurring, variation in ink density causing slight color shifts, logos distorted from following the contour of the products and fine details being lost or filled in should be expected and acceptable.

Trademarks

Please be sure all aspects of the design are correct and that any use of third party content and/or trademarks is lawful. We assume no liabilities for unlawful use of third party content and/or trademarks approved by customer. We will do everything we can to recognize possible issues. However, it is the customer's responsibility to approve a design for use. Accordingly, customer, at its expense, shall protect, defend, and indemnify us against all claims alleging infringement of any intellectual property rights by printing and /or delivering any designs under this order. Each design must be approved and received by the Graphics Department in order to further process order requests.

Print Production Conditions

MTO Print orders are subject to a 10% shortage/overage, not to exceed plus or minus 5 cases in quantity of the requested order and the customer must consider this acceptable when ordering.

Cancellations

MTO Orders and shipping Instructions for print orders may not be modified or canceled without prior written consent from Pactiv Evergreen. If, cancellation is agreed upon, all costs incurred will be paid for by the customer.

Compostable Usage Requirements

Due to certain state restriction we have the below policy.

The state of Washington requires all compostable products be readily and easily identifiable. Each product needs to include:

- The word "Compostable," along with the qualifying language of "Commercially compostable only. Facilities may not exist in your area." If possible, also include "Not suitable for home composting."

- Third party certification logo, i.e., BPI or CMA.

- Partially colored/tinted green, beige or brown or have a green, beige or brown stripe or band 0.25 inch wide.

Colorado has similar requirements, but coloring/tinting/striping must be green.

California will soon have similar requirements.

Products marketed as "compostable" in other states must include "Commercially Compostable Only, Facilities may not exist in your area." and add "Not suitable for home composting" if space is available.

All Greenware PLA Cups have the required information molded in the bottom of the cups. So, except for cups sold in Washington, Colorado and most likely California, nothing else needs to be printed on the cups.

PLA Portion Cups will need all three elements included above printed on the cups as it is not molded into bottom yet.

Recyclable Usage Requirements

- All PET cups/containers, if we're claiming "recyclable," would need the qualifying language of "Check locally. May not be recyclable in your area."

- PP cups, if we're claiming "recyclable," would need the qualifying language of "Check locally. May not be recyclable in your area."

- Clear PP containers, if we're claiming "recyclable," do not need the qualifying language.

- PS and PLA cups/containers are not recyclable, so do not print this claim on them.

Made in America

Whenever Made in America is used, it should also include "from globally sourced materials."

Vector and Raster Art

Artwork Formats

Vector art and raster art are the two types of artwork that are used when creating the digital designs.

Vector Format

The vector format saves images not as pixels, but in the form of geometrical shapes and lines (vectors). Since the quality of the image is not based on the size of the pixel, it can be re-scaled without affecting the sharpness of the image. Adobe Illustrator is the main software program for the manipulation of vector based artwork.

Raster Format

A digital image consisting of a matrix of individual pixels. The quality of the image is directly related to the size of the pixels. Raster art is designed to handle the subtle tone variations found in photographs. Adobe Photoshop is the main software program used for the manipulation of raster images.

The advantages of vector art:

- Unlimited scalability
- Will always print at the highest resolution
- Unlimited editing without degrading the image
- File sizes remain small
- Spot colors are easy to define and change as needed

Vector art is best for use on the following:

- Logos
- Illustrations that require scaling
- Crisp lines and well defined solids
- Stylized text

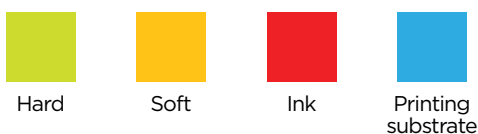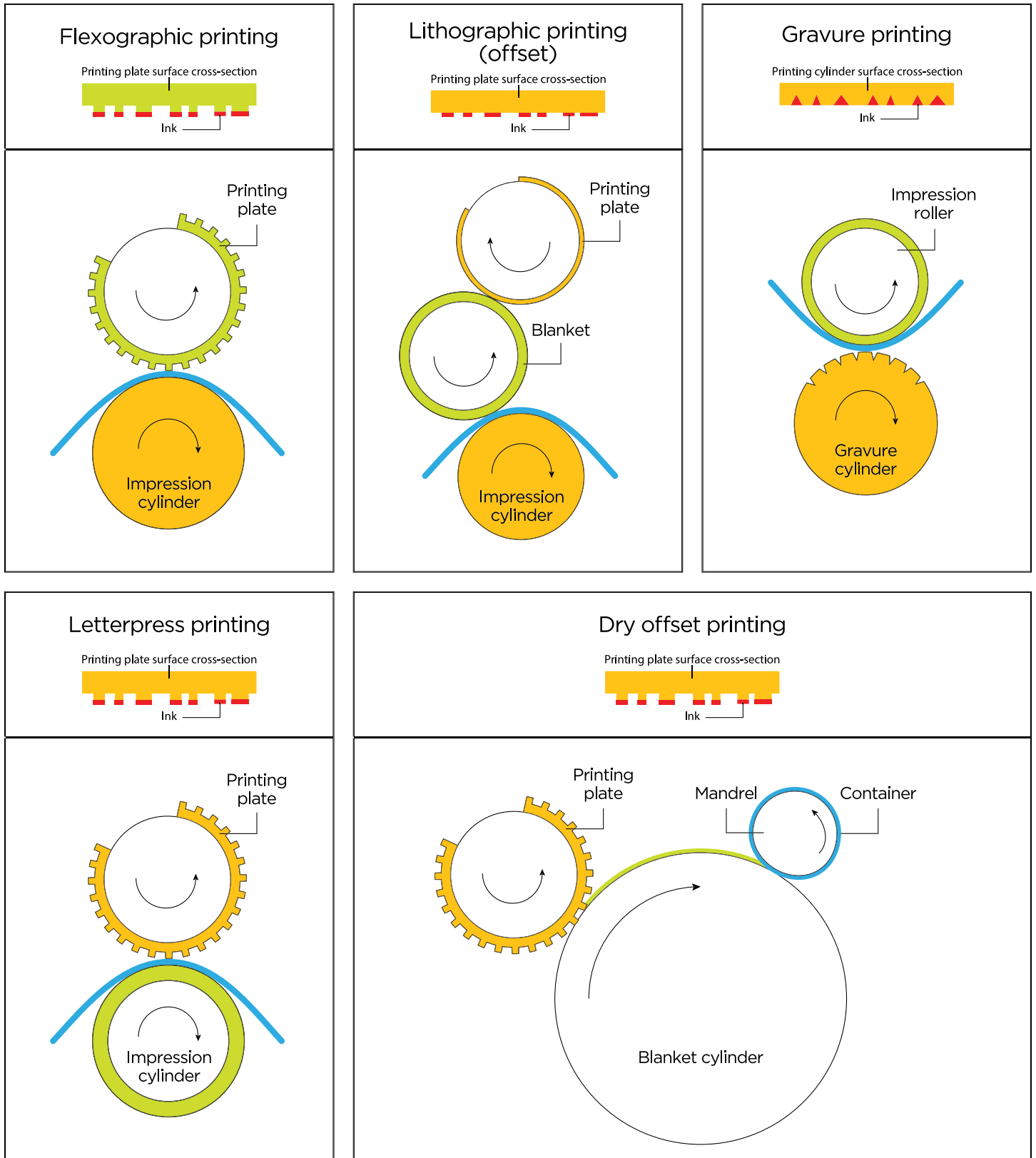### The advantages of raster art:

- Representation of subtle tones

Raster art is best for use on the following:

- Color or black and white photographs
- Soft edged illustrations with delicate tonal qualities

Edges of vector based art remain crisp and sharp when enlarged.

Since the edges of raster based art become blurry and jagged when enlarged, it should not be used when creating or saving logos.

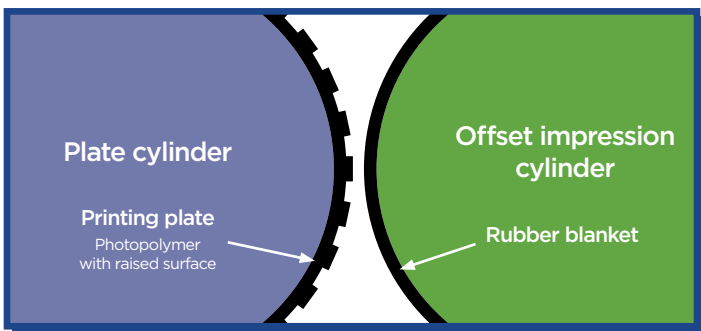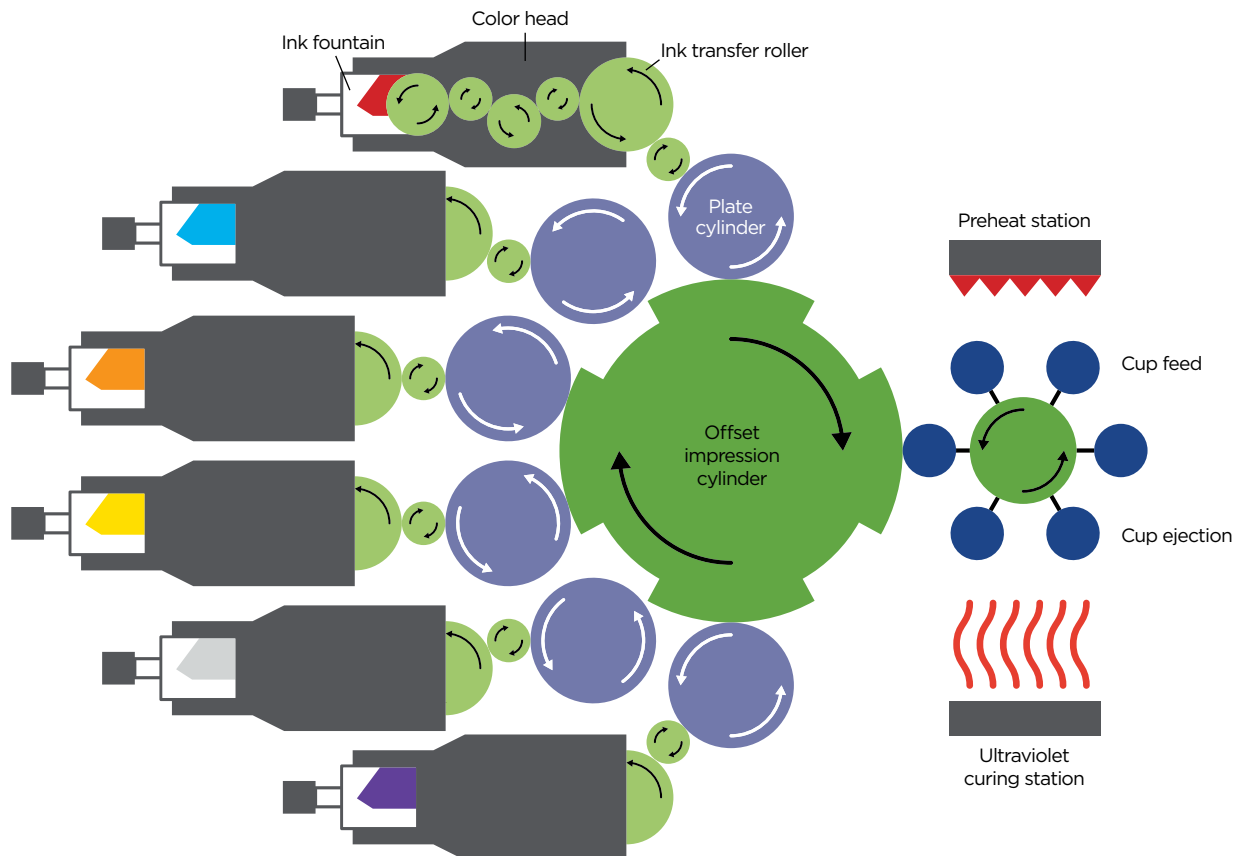# Print Methods and Differences

Flexographic printing

Printing plate surface cross-section

Ink

Printing plate

Impression cylinder

Lithographic printing (offset)

Printing plate surface cross-section

Ink

Printing plate

Blanket

Impression cylinder

Gravure printing

Printing cylinder surface cross-section

Ink

Impression roller

Gravure cylinder

Letterpress printing

Printing plate surface cross-section

Ink

Printing plate

Impression cylinder

Dry offset printing

Printing plate surface cross-section

Ink

Printing plate

Mandrel   Container

Blanket cylinder

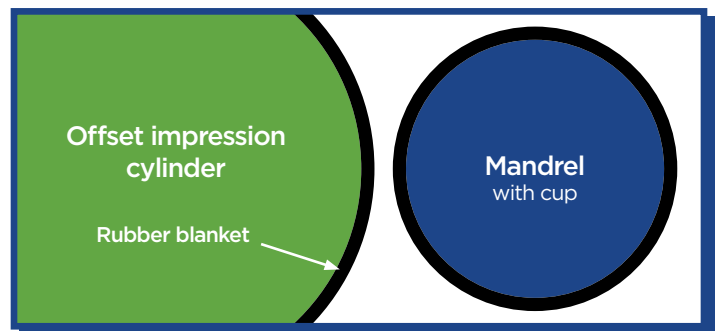Hard   Soft   Ink   Printing substrate

Dry Offset Printing on Tapered Plastic Containers

Ink is drawn from a reservoir through a series of rollers (to make the ink distribution uniform), and is then applied to the raised surface of the printing plate.

Plastic cups are flame-treated prior to printing in order to improve ink adhesion. Once the ink is applied, an ultraviolet lamp cures the ink before the cup is ejected.

Ink fountain · Color head · Ink transfer roller · Plate cylinder · Offset impression cylinder · Preheat station · Cup feed · Cup ejection · Ultraviolet curing station

Plate cylinder
Printing plate
Photopolymer with raised surface

Offset impression cylinder
Rubber blanket

Offset impression cylinder
Rubber blanket
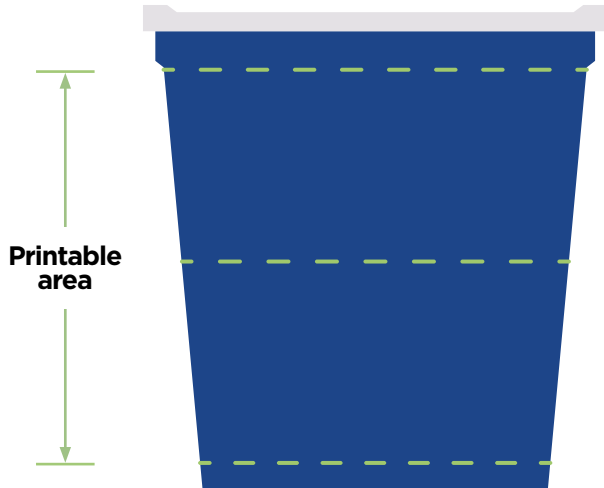
Mandrel with cup

Raised portions of the printing plate transfer the ink to a rubber blanket on the offset cylinder.

Each plate transfers one ink color onto the blanket. The blanket receives all colors of ink in one revolution.

The image on the rubber blanket, consisting of all combined colors, is transferred (i.e. offset) in one pass onto the plastic container.

Print Area Dimensions on a Tapered Plastic Container

Printable area

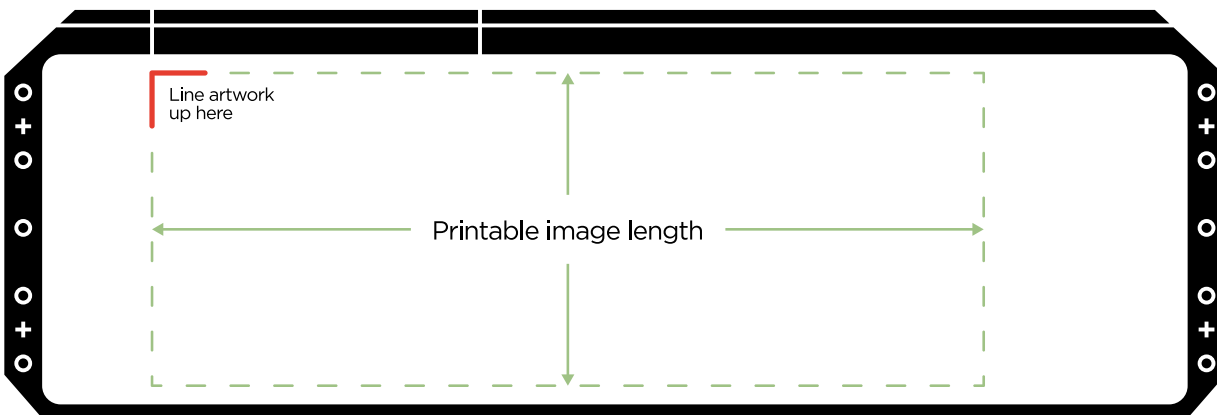### Largest Printable Circumference
Top of the imprint area

Median Circumference Length
Length the printing image should be, which enables the machine to distort the image to accomodate larger and smaller print image lengths on the same cup

Smallest Printable Circumference
Bottom of the imprint area

Printing Plate Layout

Line artwork
up here

Printable image length

Printable image length
Derived from the "median" circumference length of the tapered plastic container