RPA Training Manual

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Purpose of This Training Manual

The purpose of this training manual is to provide sales and customer service personnel with the means to recognize the packaging needs of all types of prospective customers, and to be able to determine the best products to fit those needs. By learning the preferred use of each of these packaging items, by experiencing how each product performs, and by discovering alternative uses of these items, all personnel can become more confident in making appropriate recommendations to a variety of end users. At the same time, we encourage all sales and customer service representatives to become familiar with the specific products provided by your company's primary suppliers of retail packaging items. Being able to determine which product will do the best job for the customer, as well as knowing which manufacturer has the ability to provide that specific product are of utmost importance.

Bag Style

A wide variety of paper and plastic bags are available to fill the needs of every business---retailers, manufacturers, sales and promotional organizations, and restaurants, just to name a few.

With custom printed bags that showcase a business's logo or that give information as to the service or products the business can provide, the bag becomes a walking billboard and not just a means of carrying goods. Bags of all types can be a terrific image builder in the community, and an invaluable advertising medium.

Because there are so many sizes, shapes, handle styles and materials from which bags can be manufactured, it is imperative that we become familiar with the function of each one, so that we can direct a customer to the size, style and material that will best suit his requirements.

Merchandise Bags

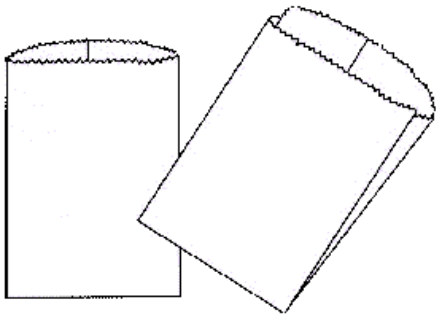
Merchandise bags (which can also be called Notion or Millinery Bags) may be made from paper, high density plastic or low density plastic. From the variety of sizes available in this bag almost every retailer's needs can be met.

At the top of the bag where the front and back come together, the edges may be zig-zagged (like they were cut with pinking shears). If so, the bags are called "serrated edge" or "S.E." bags. If the front and back of the bag are exactly even, they are called "flush cut".

A merchandise bag may be flat, or there may be an expansion on the sides which is called a "Gusset." Remember that if the bag has a "gusset" on the bottom, it is not a merchandise bag -- it will be a grocery style bag or a shopping bag.

Be sure to read the "How to Measure a Bag" section to learn in what order a merchandise bag's dimensions are listed.

Merchandise bags are an excellent add-on to any packaging program for those small item sales. Card shops, newsstands and book stores are popular markets for this product.



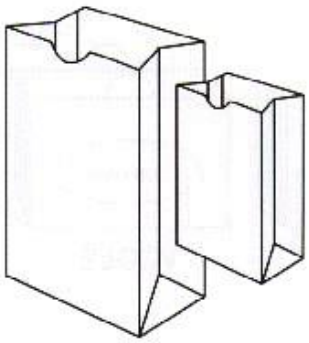
Grocery Bags

These bags (which are also called SOS – Self-Opening Style) are most often constructed of white or natural kraft paper, but may also be high density plastic. They are flat on the bottom, have side gussets, and will usually remain open and in an upright position without assistance. This provides the end user with an easy-to-load bag that was intended to hold heavy and/or bulky products.

The bag sire and the weight of the paper from which it was constructed, will usually determine the possible end-uses of this extremely diverse bag style. The SOS or grocery bag, however, is not often used by a retailer who is image conscious -- it is considered to be primarily "functional" packaging and is rarely used by upscale retailers who sell high-end merchandise.

In small sizes, the SOS style may be a lunch bag, a carry-out food bag, and even a gift bag when constructed from giftwrap or other paper that has been pre-printed in a bright color or festive design.

In larger sizes, usually constructed from heavier weight papers, these bags are used by grocery and hardware stores, discount stores, lumber yards, craft stores, shoe, toy and sporting goods stores and potentially any retailer selling bulky or heavy products.

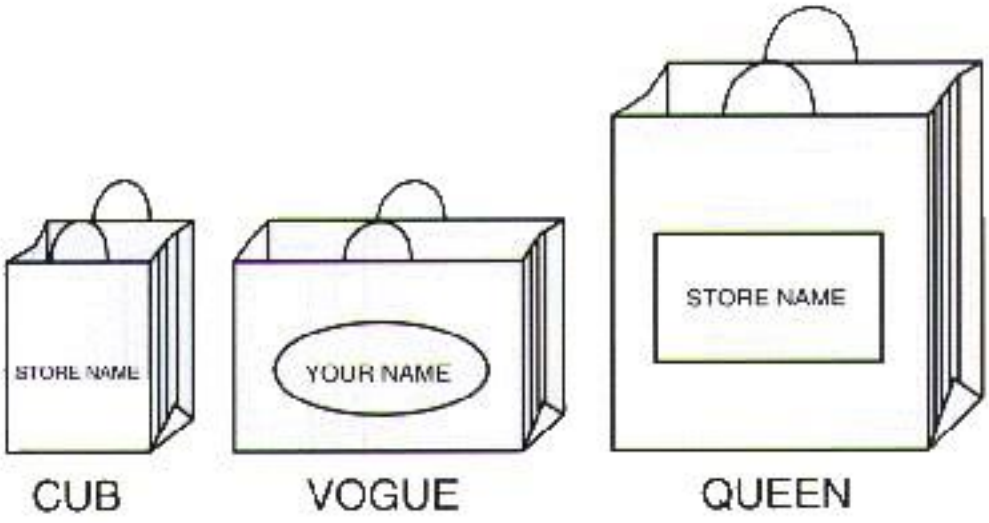


Shopping Bags

The shopping bag has a flat bottom, side gussets and comes with two handles attached to the edges of the bag.

Shopping bags are most often made from paper but may be constructed of low density polyethylene. As one of the more expensive paper or plastic bags available to retailers today, the shopping bag has traditionally been limited to stores who are marketing expensive merchandise and can, therefore, justify the cost of a shopping bag. However, this bag style offers a wide variety of end uses that far exceed the traditional retailer's need to package the goods that are leaving the store. For example, the shopping bag has become a form of gift packaging that can often replace a gift wrapped box. When constructed of colorful paper, or printed with unique designs, etc. the bag has become the quick and creative to "wrap a gift."

This bag is also popular with non-retail businesses to use as a promotional piece, or as a give-away when introducing new products, or when exhibiting at trade shows or industry conventions.



Shopping Bags (Continued)

Though the preferred size may vary, both clothing and giftware retailers use shopping bags as functional packaging and as a sure-fire way to establish an upscale image. Fine jewelry and cosmetic retailers have found a small shopping bag to be an integral part of their packaging program.

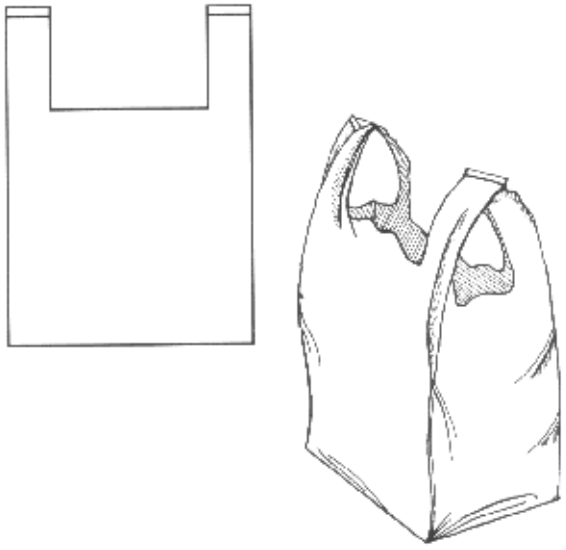
Natural kraft shopping bags are used in great quantities around the larger cities in this country by the supermarkets; especially in areas that have a large walking trade.

As a standard, most paper shopping bags come with a twisted paper handle in white or natural, but optional colored paper handles, plastic handles, macramé or braided handles may also be offered (sometimes with an upcharge or with a higher minimum order). Further, there may be optional turned down tops available rather than the traditional serrated edges; there may also be a variety of grades of paper and laminated finishes from which to choose.

T-Shirt Bags

The T-shirt bag may be constructed of either high density polyethylene or low density poly. Most commonly, the bag is of High-Density and will be found in stores whose products are bulky and/or heavy. This type of bag is usually inexpensive to manufacture and is, therefore, popular with food or retail operations that must have inexpensive, functional packaging and are less concerned with image.

Because T-shirt bags usually have a very wide gusset on the sides and have two strong strap handles, this bag style lends itself to grocery stores, shoe stores, sporting goods stores, and all types of discount clothing and gift stores. The very wide gussets make this bag especially good for take-out food establishments. Some large foam food containers will not fit in a grocery bag or in most shopping bags, but will fit nicely in a T-shirt bag.



Patch Handle Plastic Bags

An oval or rectangular hole is cut into the upper portion of the bag, with a reinforcing "patch" of clear plastic that has been glued or heat-sealed to the inside of the bag. A "waffle" effect is usually visible around the handle hole on the outside of the bag.

The patch handle bag is available from most low density bag manufacturers and from a few high-density manufacturers. The bag is relatively inexpensive when compared to other plastic handled bags, allows the graphics on the bag to be clearly visible and has a contemporary look. The handle, however, will not fit over the wrist and this bag style is usually not preferred for heavy items; but it is very popular for jewelry, clothing and small gift items.

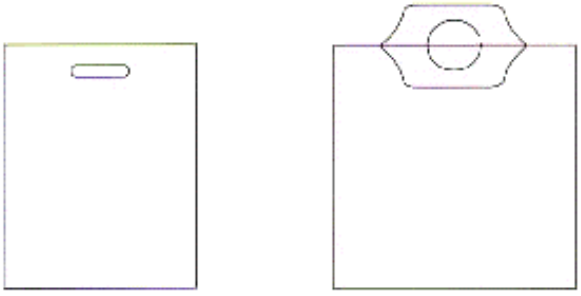
Die Cut Handle Bags

Usually the top of this bag is folded over and an oval or rectangular hole is cut into the upper portion. There is no reinforcement around this handle.

This handle style is often the least expensive bag in a manufacturer's line. Like the Patch Handle Bag, it has a contemporary look and offers unobstructed view of the advertising message the retailer may print on the bag. This style is best suited for light-weight items and is excellent for clothing, jewelry, cosmetics and small gift items.

Thick/Thin Plastic Bags

Thick/Thin low density plastic bags are made from a unique process which manufactures a bag that is thicker at the top where the handle is located and carrying strength is required. Thick/Thin bags are generally manufactured in two styles; a straight top die-cut handle bag and a curved top sine-wave or pullbag. Because of the manufacturing process, Thick/Thin bags are available in a wide range of film colors, offer excellent graphics and are very economically priced.



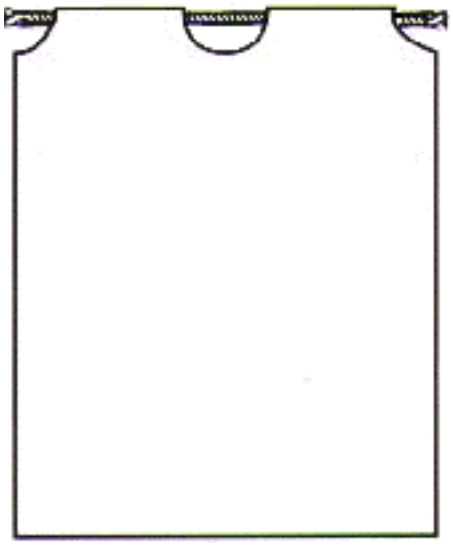
Drawstring Plastic Bags

The closure of this bag is a length of string or cord that is visible at the top of the bag. Just as with the plastic draw bag, (see next page) the two strings create a handle when the bag is drawn shut. Both of these bags are in the middle price range of plastic bags and are preferred by the same types of retailers. The uses for the drawstring and plastic draw bags are similar and it is usually just personal preference that causes a potential customer to choose one style over the other.

Because the bag is gathered at the top when it's closed, the printing on the bag may be distorted. To avoid reducing the customer's advertising benefit, it is recommended that most of the print copy be confined to the lower half of the bag.

Because this handle style is so convenient for anyone to carry, and it is often kept and re-used, both the drawstring and plastic draw are excellent in tourist areas or resort communities.

These bags may be flat but are most often constructed with a bottom gusset (expansion). The third dimension will be the key to the gusset size -- 16 x 18 x 3 means that there is a 3" bottom gusset.



Plastic Draw Bags

This bag (which is also called Poly Draw, Poly Pull or Draw Tape) is drawn shut at the top with a strip of polyethylene. The strip of plastic creates a handle on each side after closing the top of the bag. This bag is slightly less expensive than the Drawstring (shown on the previous page) and serves all the same functions.

This bag is available from most plastic bag manufacturers and is preferred by shoe stores, sporting goods stores and those clothing retailers who sell active wear or children's garments. Because the bag is gathered up at the top when closed, the contents of the bag are often forced into a "clump" at the bottom of the bag. For this reason, it is not usually preferred by upper-end clothing stores, but is excellent for boxed shoes, jeans, T-shirts and swimwear. This style is also popular for hotels/motels to use for a swimsuit bag or for their laundry bags.

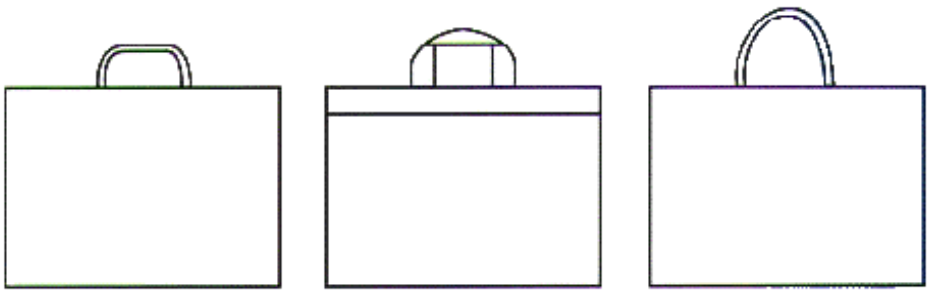
Rigid or Soft Loop Handled Bags

On plastic bags, several handle styles are available that are attached to the upper edge of the bag. Most often these are heat sealed to the plastic and are usually more expensive than the other handle styles offered by a given manufacturer.

These handles may be a molded, rigid handle in a rectangular configuration or in a loop shape; or they may be a heavy piece of polyethylene that creates a "soft" loop at the top of the bag.

These handle styles are not offered by all plastic bag manufacturers, and are appropriate for only a limited number of retailers. Like the paper shopping bag, when custom printed, they present an upscale image and the loop handles allow the bag to be slipped over the end-user's wrist. Also, like the paper shopping bag, these bags are very popular for promotional and/or trade show purposes. However, these bags do not have side gussets, are not free standing, so poly bags with these handle styles are not usually intended to hold heavy items and are generally found to be more appropriate for apparel or other soft goods. Bulky and/or heavy giftware items don't usually fit well in these bags.

These bag styles are often available in both singlewall (one layer of plastic) and in doublewall (a clear layer of plastic over the white or colored layer) construction.

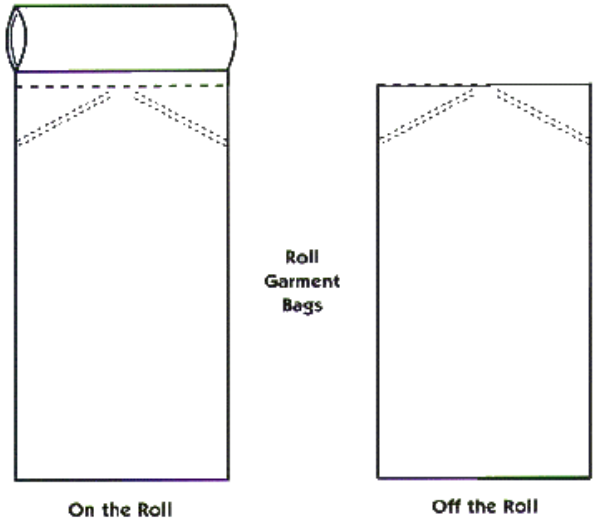


Garment Bags

"Garment Bag" is a general term used to describe the product which covers clothing on a hanger. This bag may be plastic and come on a roll, it may be plastic but sold as individual cut bags, or it may be vinyl, nylon or a variety of other materials and have a zipper somewhere on the front or side.

Roll Garment Bags

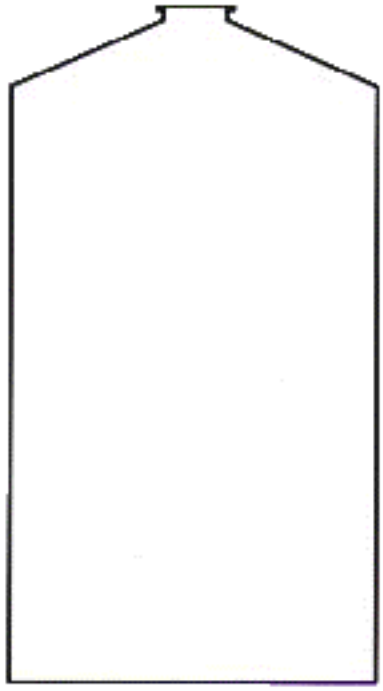
A Roll Garment Bag may be constructed from thin gauge polyethylene (usually 1 mil thick or less) and be put on a roll containing approximately 1500 feet of material. These "Roll Bags" are available in a variety of lengths to accommodate children's clothing, men's suits, ladies' street length dresses, floor length dresses, and others. The bags are perforated at the length specified and one bag can easily be torn off the roll to be placed over the hanging garment. This is the garment bag used most widely by retail clothing stores.



Individual Poly Garment Bags

Most often made of 1 mil polyethylene or heavier, these bags are not on a roll, but are individually placed in a carton and may be removed one at a time. These bags are considerably more expensive than a Roll Garment Bag, but specifically appeal to clothing retailers who are selling expensive items and want a more upscale look.

When printed with the customer's logo, both the Roll Garment Bag and the Individual Bags become one more way for the retailer to advertise.



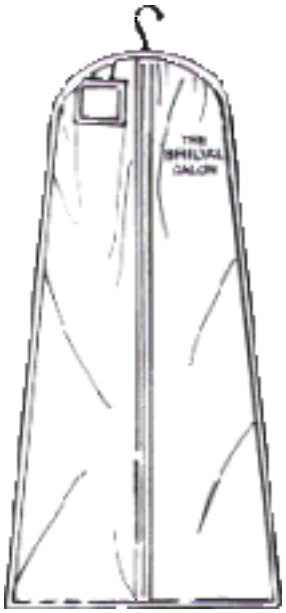
Individual Cut Garment Bag
(Not on a roll)

Zipper Garment Bags

Usually made from vinyl or nylon, a Zipper Garment Bag is frequently provided by upscale clothing retailers and is used more by menswear stores than by ladies clothing stores. Bridal and formal wear stores often use a 72" long zipper bag that is specifically constructed to accommodate a bridal gown -- it may have a flair at the bottom, or it might have a wide gusset.

Because a Zipper Bag is re-usable, it is most often kept by the consumer and becomes a hanging "travel" bag or is used as a clothing storage bag. The retailer may use this more expensive bag only for specific merchandise (men's suits but not the sport coats, for example) and may, use the Poly Roll less expensive items (slacks and sport coats, for example).

The zipper may be in the center of the face of the bag, it may be positioned diagonally across the bag, or it can be on the side. Most Zipper Bag manufacturers offer only one zipper position so it's important that you be familiar with the specifications of the bag your primary vendor provides.

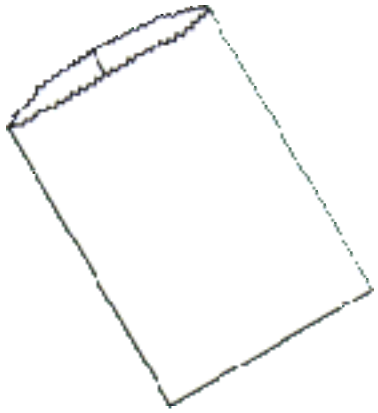


How to Measure a Bag

Flat Bags

Those with no side or bottom expansion, which is called a "gusset").

- Bag dimensions should be measured width x height e.g. 1P x 15
- (Note: for serrated edge paper merchandise bags, where the front of the bag is slightly shorter than the back of the bag, the height is determined by measuring the front or shorter side).

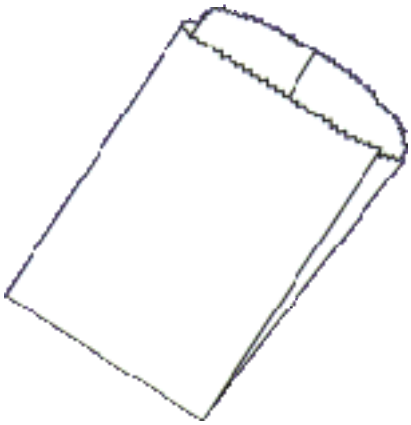


Gusseted Bags

- Those that do have a side or bottom expansion).

- If the gussets are on the sides of the bag (not the bottom) the gusset dimension should be placed between the width and height.

- Width x side gusset x height e.g. 12 x 3 x 18



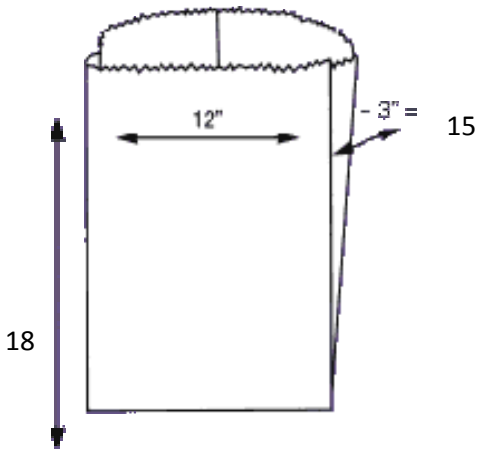
How to Measure a Bag (Continued)

If the gusset is on the bottom of the bag (not on the sides) the gusset dimension should be the third figure given.

Width x height x bottom gusset e.g 16 x 18 x 3

If the gussets are on the sides and on the bottom of the bag, measure the width x side gusset x height x bottom gusset. Side and bottom gussets are usually found in paper and poly shopping bags and in SOS (grocery style) bags. Some manufacturers of these bag styles may list the bag sizes with only the width, side gusset and height since the dimension of the side gusset and the bottom gusset will always be the same. e.g. 16x6x12.

Please Note:
To find the flat equivalent of a gusseted bag, use the width of the gusseted bag plus the gusset dimension. e.g. 12x3x18 is a gusseted bag. To find its equivalent, add 12 plus 3 for a total width of 15. Therefore, a 15 x 18 bag is the flat equivalent.



Boxes

Introduction
Purpose of retail boxes - convey the store's brand, merchandise protection, customer service

Box Construction

Box Construction
Determining the appropriate style of box

- **Application:** Apparel, giftware, jewelry
- **Content:** Dimensions, shape, weight, special properties (ie. food, breakables)
- **Purpose:** Gift giving, in store display, shipping
- **Loading:** Hand or machine
- **Samples:** Customer's current box

Measurements - in sequence of Length X Width X Depth when box is facing you with the opening pointing up. Measurements should be taken from the center of a score to center of score of outside.

- **Length:** Longest open dimension from left to right

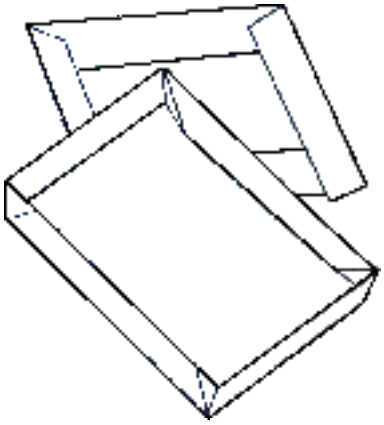
- **Width**: Shortest open end dimension from front to back

- **Depth**: Remaining dimension from top to bottom

Box Styles

Folding

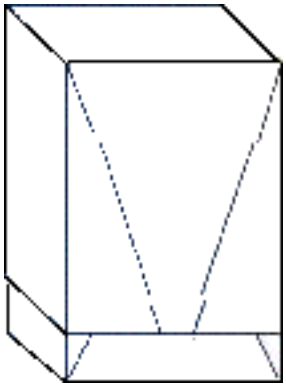
- Used for clothing, apparel and giftware purchases.
- Refer to Box Size Recommendation Chart Also known as **pop-up, automatic or glued corner**
- Stores flat, taking up less space than setup, less costly to ship than set-up Lower cost than set-up boxes of the same size.



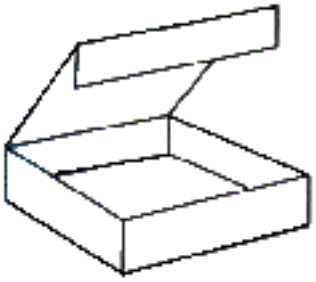
2 pc. Beers Box

Subcategories:

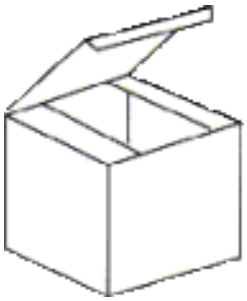
- 2 pc. Beers
- 2 pc. Simplex
- 1&2 pc. Lock Corner – forms box by inserting tabs in slots. More time consuming than automatics
- 2 pc. Lock Corner Telescoping tab and slot design with lid sliding down over entire box for added strength
- 1 pc. 4 or 6 Corner Glued
- 1 pc. Pinch Lock
- 1 pc. Automatic Bottom, built in lid
- 1 pc. Lock Bottom, Tuck Top
- 1 pc. Tuck End
- 1 pc. Custom Die Shape



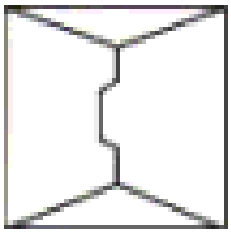
2 pc. Lock Corner Fold Box



1 piece Pinch Lock Box



Tuck Top Box

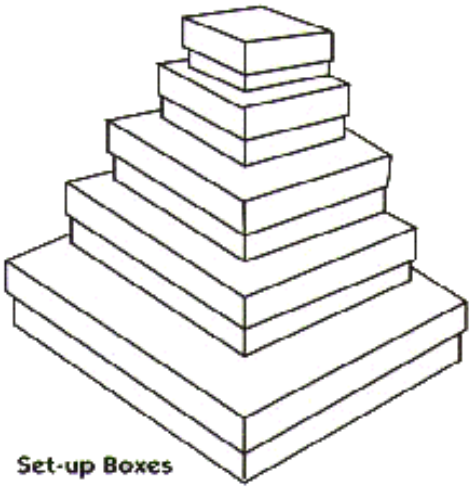


1 pc. Lock Bottom

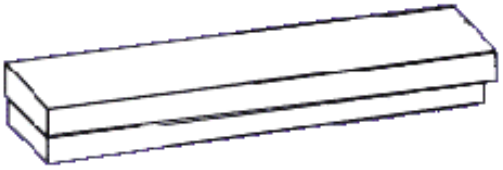
Box Styles (Continued)

Set-up Boxes

- Most commonly used for jewelry, but may be used for apparel, giftware or candy. Standard jewelry sizes usually come with cotton inside. Refer to Box Size Recommendation Chart.
- Also known as **rigid**
- Sturdier construction makes it top of the line
- Takes up more space than folding because they do not store flat, are nested whenever possible to reduce the amount of storage space needed.



Set-up Boxes



Box - Board Options

Board Options

Type and thickness of board should be selected based on such considerations as:

- The color needs for the interior as well as the exterior
- The printing application to be used
- The carton strength required

Type of Board

- **Solid Bleached Sulphate** (SBS) - virgin material:
  A high quality board, white throughout with one side coated.

- **Clay Coated Kraftback** (CCKB) - recycled or virgin materials: Heavy duty board with white top and brown back.

- **Clay Coated Newsback** (CCNB) - 100% recycled materials: Very smooth board with white top and manila to gray back.

- **Solid Kraft (SUS – Solid Unbleached Sulfate)** - virgin material: Very strong board, brown throughout, with smoother top.

- **Tan Bending Chip** - 100% recycled materials:
  Similar to Solid Kraft but with coarser printing surface.

- **Corrugated Fibreboard** - the structure formed by gluing one or more sheets of fluted corrugating medium to one or more flat facings of linerboard. Flutes are the wave shapes pressed into corrugated medium. Types of flutes in common use are: A, B, C, E, and F. A and C flutes are most commonly used for shipping boxes. B, E, and F flutes are most commonly used for die-cut boxes.

Thickness of Board

Boards for custom boxes will vary in thickness. A micrometer should be used to measure the thickness (caliper) of the board in thousandths of an inch.

Box - Exterior Design

Image and messages can be conveyed through:

- **Embossing:** a raised or indented (debossed) pattern on the box surface, produced using metal plates. Blind embossing produces a subtle effect by using "male" and "female" metal plates.
- **Imprinting:** applying ink
    - **Flexographic**
        - Most common method of printing
        - Ink applied utilizing plastic or rubber plates
        - Used when art is simple, such as 1 or 2 color, low ink coverage, and when registration is not as tight
        - Less distinct and consistent than offset printing
        - Inexpensive compared to other processes
    - **Offset** (Lithography)
        - Ink applied utilizing a thin metal plate
        - Used when art is complete, multi-colored, or high in ink coverage
        - Distinct, high quality, tight registration printing
        - More expensive than flexographic

- **Lamination:** applying paper or foil to board.

- **Hot Stamping**: applying film or foil in a design using a heated metal plate. Plates are made of copper or magnesium and are often expensive. Frequently used on tinted boxes when clarity of color is an issue.

Order Quantity

Box prices are most often quoted as price per thousand, but may quoted as price per hundred, or by the carton. Order quantities for 3, 6 or 12 months usage are most common and recommended, for your customer to benefit from the economies of scale in offsetting set-up charges such as artwork or plates.

Box Size Recommendation Chart

Apparel Sizes:

Apparel Sizes	Folding Style
10 x 7 x 1-1/4	Small lingerie, linens, blouse
11-1/2 x 5-1/2 x 1-1/2	Gloves, hosiery, socks, ties
11-1/2 x 8-1/2 x 1-5/8	Large lingerie, blouses, children's wear, towels
15 x 9-1/2 x 2	Dresses, shirts, blouses, negligee, skirts, sweaters
17 x 11 x 2-1/2	Blankets, bulky sweaters, robe, raincoat
19 x 12 x 3	Bedspreads, blanket, robe multiple sportswear sets
24 x 14 x 4	Blankets, gowns, coats, suits
25 x 15 x 5	Heavy coats, furs
15 x 11 x 4-1/2	Handbag

Giftware Sizes:

Giftware Sizes	Folding Style
3 x 3 x 2	Baby cup, belts, candle holder, coasters
3 x 3 x 3	Ornaments
4 x 4 x 4	Salt and pepper, cups
4-1/2 x 4-1/ 2 x 2-1/2	Salt and pepper sets, coasters, candle holder
5 x 5 x 3	Demitasse cup, cups, salt and pepper sets
5 x 5 x 3-1/2	Belts, clocks, demitasse, powder box
6 x 4 x 4	Tumblers, mugs, flower, small figurine, teacup
6 x 6 x 2	Tiles, ashtray, china
6 x 6 x 4	Bookends, candy dish, clock, perfume, cup & saucer
6 x 6 x 6	Bookends, bowls, platter, urn
7 x 7 x 7	Candy dish, cookie jar
8 x 8 x 2	Ash trays, bread a butter dish, candy dish
8 x 8 x 4	Ash trays, bookends, candy dish, bowls
8 x 8 x 6	Bookends, bowls, toaster, cosmetics, juice set
8-1/2 x 8-1/2 x 8-1/2	Bowls, casserole, coffee pot, cookie jar, ice buckets
9 x 6 x 6	Pottery, tumbler, vase, figurines, vase, bookends
9 x 9 x 3	Ash trays, bookends, bon bon dish, bowls

Box Size Recommendation Chart (Continued)

Giftware Sizes	Folding Style
9 x 9 x 5	Casserole, chin, handbags, salad bowl, silver tea pot
9 x 9 x 7	Stemware (2 large)
9 x 9 x 9	Bowls, casserole, coffee pot
10 x 4-1/2 x 4-1/2	Brandy snifter, bread & butter dish, figurines, vase
10-1/2 x 10-1/2 x 2	Ash trays, dinner plate, plaque, sandwich tray
10-1/2 x 10-1/2 x 5-1/2	Casserole, fruit bowl, stemware
10-1/2 x 10-1/2 x 8-1/2	Casserole, dinner plate, goblets
(1 doz., 8 oz.) 11 x 3 x 3	Bud vase, candies, figurines, ladle, pastry server
11 x 11 x 3-1/2	China place setting, handbags, salad bowls
12 x 6 x 2	Bread tray, candlesticks
12 x 6 x 6	Bookends, figurines, glasses, gravy boat, stemware
12 x l2 x 2-1/2	Cake plate, dinner plate, place setting, tidbit tray
l2 x l2 x 5-1/2	Bowls (deep), fruit bowl, Glasses (1 doz.), hi ball set
l2 x l2 x 7	Casserole, chafing dish
l2 x l2 x 10	Water set
13 x 3-1/2 x 3-1/2	Liquor bottle (1), planter, statuette, vase- bud
13 x 7 x 4	Bread tray, candlesticks, liquor bottles (2)
14 x 8 x 6	Bowls, candlesticks, planters
14 x 14 x 2	Cake plate, platter, sandwich tray, tray
14 x 14 x 5	Centerpiece, cocktail set, goblet and sherbets (8), handbags
14 x 14 x 10	Lampshade
15 x 7 x 7	Bowls, candlesticks, planters, pitcher, statuette, liquor bottle (1)
16 x 16 x 2-l/2	Picture frame, plaque, platter, relish set, tray
17 x 8-1/2 x 8-l/2	Cocktail shaker, hurricane lamps, ice buckets
18 x l4 x 2	Baby blanket, picture frame, tray
24 x 16 x 2-l/2	Bathrobe, platter, tray

Box Size Recommendation Chart (Continued)

Jewelry Boxes:

Jewelry Boxes	Set up style, Cotton Filled
2-l/2 x 1-3/4 x 1	Small Earring
3-1/8 x 2-1/8 x 1	Large Earring
3-1/2 x 3-1/2 x 1	Bar Pin
3-l/2 x 3-1/2 x 1-1/2	Bracelet
3-1/2 x 3-1/2 x 2	Large Bracelet
8 x 2 x l	Necklace
5 x 3-1/2 x 1	Utility
7 x 5 x 1-1/4	Bib Bead
4-1/2 x 4-1/2 x 3/4	Tie

Specialty Boxes for Sweets:

½ lb.	5-1/P x P-3/4 x1-3/4	1/2 lb. candy, fudge
1 lb.	7-1/8 x 3-1i4 x 1-7/8	1 lb. candy, fudge
2 lb.	9 x 3-3/4 x P-3/8	2 lbs. candy, fudge

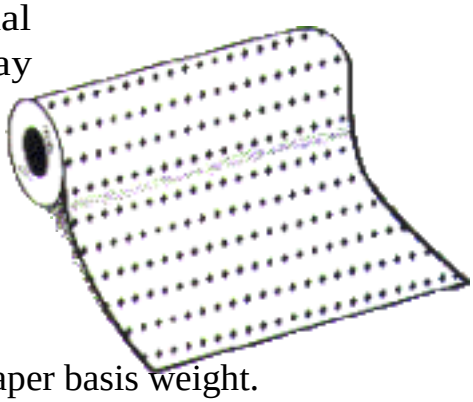
Set Up Boxes for Candy:

1/8 lb.	3 ½ x 3 ¼ x 1 1/8
¼ lb.	6 ½ x 3 ½ x 1 1/8
½ lb.	8 1/8 x 5 ¼ x 1 1/8
1 lb.	10 ½ x 8 1/8 x 1 1/8

Gift Wrap

Wrapping Paper
Available in a wide variety of stock patterns and custom print. Typical stock designs include:

- **All Occasion** -Masculine, Feminine, Transitional
- **Seasonal** - Christmas, Hanukah, Valentine's Day
- **Birthday**
- **Baby**
- **Juvenile**
- **Wedding**
- **Solids**- Foils, Textures, Embossed



The giftwrap may look or feel different depending on the paper basis weight.

Lightweight:

- 35 or 40 pounds
- Less expensive
- Have the potential of show-through if used over colorful items

Heavyweight:

- 50 to 60 pounds
- More opaque, eliminating show-through

Typical dimensions include:

Lengths:

- 833’ Full Ream
- 417’ Half Ream
- 100’ Cutter Box

Widths:

- 7-3/8" Jeweler's Roll
- 12" Jewelry Stores
- 15"
- 18" Children's Apparel
- 20"
- 24" Apparel
- 26" Department Stores
- 30" Giftware
- 36" Toys/Sporting Goods

Gift Wrap 101

The concept of wrapping a gift in cloth or paper can be traced back to ancient China in the 2nd century B.C. Embellishment of gifts with ribbon was very popular in the Victorian age. Paper giftwrap has been popular since the early 1900's and remains a popular trend for birthdays, showers, weddings and of course the largest Holiday for gift giving – Christmas! The joy of watching children tear off the giftwrap to expose the hidden treasure beneath can be summed up with the term "the tear factor", which helps express the continued popularity of wrapping gifts.

Type of printing processes for giftwrap:

- **Flexographic printing**
  - Uses photo polymer plates that are mounted to a printing cylinder to print image. Plates are less expensive and press is designed for quick change over.
- **Gravure printing**
  - Uses engraved metal cylinders to print image. Ideal for longer print runs. Great quality on process.

Color Options: Both Flexo and gravure presses can be used to print spot color and 4 color process (CMYK). The advantage to spot color printing is the ability to change colors of background or whole design in future runs. Presses can usually go up to 6 to 8 colors although 4 to 5 color is most commonly used for most gift wrap designs.

Substrates: Although most gift wrap used in retail packaging is printed on either 40# C2S or 50# C2S, other substrates can also be used including natural or white kraft paper as well as foil.

Gift Wrap 101 (Continued)

Basis Weight Definition: The weight of the paper can vary from 40# to 60#. Lower basis weight is less expensive but can have opacity issues. Most printer stock 40#, 50# and 60#. The C2S stands for coated two sides. In the paper making process there is a clay coating added to both sides which produces a clean printing surface and gives body to the sheet. Without the clay coating, inks tend to penetrate the paper surface and will cause bleed through of the design. Paper can also be specified as C1S when paper will be laminated to a board surface. The non-coated side has the glue applied and allows for better adhesion.

Renewable Resource: Most paper used in the United States comes from – SFI certified well managed forests (Sustainable Forest Initiative) and are printed with environmentally friendly water based inks. Gift wrap is both recycled and recyclable.

Stock Line vs. Custom Printing: Manufactures in the United States offer stock line programs with a wide range of designs and roll sizes. Customers can also select custom printing with minimums ranging from 12 reams to 25 reams.

Tissue Paper

Tissue Paper

- Available in an extensive variety of stock colors or patterns and custom print
- Quality is conveyed by grade

No. 1 Grade: Retail Grade

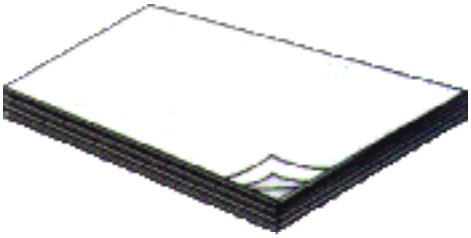
- Made of a combination of virgin and recycled material
- Greater clarity of color and brightness of white
- Most commonly used by retailers for protecting purchases and enhancing gift box and gift basket interiors
- Can be waxed or flame-retarded where required

No. 2 Grade: Industrial Grade

- Made of recycled or combination virgin/recycled materials
- Dull or uneven appearance
- Used for dunnage and protection of items in shipping

Most common sizes for white tissue are:

- 24 x 36
- 20 x 30
- 18 x 27
- 18 x 24
- 15 x 20



(Color and stock prints are usually available in 20 x 30 only)

Alternatives to tissue include cellophane, crimped paper, mylar, parchment, and fine wood products available as sheets, rolls or shred, depending on the base material. These items are most often used in gift baskets.

Shred

Decorative and functional - shred provides beauty and protection for packaged products. It's a practical source for economical packaging used mainly as decorative filler or support in gift baskets, fruit baskets, gift bags and boxes.

Substrates available depend on use and design preference:

- Parchment - for a natural look
- Waxed – thin coating of wax over tissue shred makes it more durable and moisture resistant, used mainly in food packaging
- Iridescent – translucent cello shred usually known for Easter baskets
- Metallic Film - gives a mirror type glamour or Holiday look
- Wood – very thin shreds of wood for a natural appearance
- Newspaper – an ECO type of shred reusing old newspapers
- Holographic Film – gives added dimensional shine

Shred size is the width of the paper after it has been shredded. 1/8" and ¼" are the most common widths. Wider widths are used for a sturdy look and feel and very narrow, angel hair cuts / fine cuts are used for a delicate look.

Shred can be crimped in accordion style or flat known as straight cut shred.

Colors – an expansive range of colors exist including packages of mixed colors and you can get custom coloring.

Packed in variety of sizes for bulk or retail with most common being: 8oz pack, 5lb, 10lb, 40lb, and 50lb bales.

Adhesive Labels

An inexpensive means of customizing a number of items, with a retailer's name or logo particularly customers who are not in a position to purchase a large quantity of printed boxes.

The image is reproduced by flexographic imprinting or hot stamping on paper or foil stock.

Label manufacturers offer a wide variety of existing die shapes and sizes to choose from; however, custom die shapes can be produced as well.

Labels may also be embossed (raised) or debossed (lowered).

Embossed

The embossed, or raised, portion cannot be printed. The remaining portion can be printed. Bold type or artwork provides embossing that is sharper and higher. Fine type does not emboss well.

Most labels that utilize embossing will have embossed borders as well.

Debossed

The debossed, or lowered, portion can be printed. The remaining portion cannot be printed.

Alternative uses for labels include:

- As a closure for tissue paper in a gift box
- To attach ribbon to a wrapped package in place of a bow
- As store identification on a gift wrapped package
- To seal gift certificate folders
- Store identification on hangers
- Store identification on resale products

Ribbons & Bows

Ribbon / Bows

- Ribbon is a key component of a finished gift wrapped package. Ribbon is made in a multitude of widths, colors, designs, and materials. Some ribbon can be custom printed or hot stamped.
- Base materials often consist of polypropylene or other synthetic materials but may be fabricated from cotton, rayon, paper or other natural fibers.
- There are many different types of ribbon edges available as well. The most popular in packaging are:
    - Wired Edge - ribbon with fine copper wire woven along its edges to hold the shape of bows or blooms.
    - Monofilament Edge – ribbon with a synthetic fiber (a "fishing line") running along its edges to give the ribbon body so that ribbon bows don't droop.
    - Cut Edge – ribbon made from wide fabric that is cut into narrower strips. Sizing is applied during the manufacturing process to prevent fraying (which gives this ribbon a stiff or crisp feel)
    - Embellished Edge – features decorative edges enhanced with materials such as pearls, lace or other detailing

Ribbons & Bows (Continued)

- Ribbon is most often sold on spools or converted into bows or bow hanks. Bows or bow hanks will often come with an adhesive backed card attached for easy application. Bows should be complemented with the use of ribbon of the same width around the package. One exception to this is a pull bow that is constructed with an inner ribbon that can ultimately be used to attach the bow to the package and eliminate the need for a separate ribbon.
- Special use ribbons are designed specifically for curling, hand tying, and machine made bows. Ribbon made with these applications in mind are most often identified as such by the manufacturers.
- The most common ribbon specifications are:
    - Widths: 3/16, 3/8, ¾, ¼, ½, 7/8, 5/16, 5/8, 1-1/4.
    - Lengths: 100 Yards, 250 Yards, 500 Yards
- Bows (along with coordinating ribbon) are another key component of packaging and, like ribbon, comes in a multitude of widths, colors, designs, materials and diameters.
- There are many different types of bows available as well. The most popular in packaging are:
    - Stretch Loops: decorative elastic, tied into a large loop and a bow that can be used in place of a ribbon and bow combination.
    - Adhesive Back Bows: Bows affixed to an adhesive backing for easy application to packages.
    - Pull Bows: self-sufficient bow without staples, ties or other fasteners/adhesives. Contains 1 or 1 inner ribbons/strings positioned inside a wider outer ribbon. When pulled, outer ribbon loops automatically arrange into a bow. Pull strings can then be used to tie to package or curl.
    - Pre-Notched Bows: also referred to as hanks. Consists of folded ribbon with a small “V” or “U” shaped cuts made in the center. Bows are fluffed one loop at a time.
    - Twist Tie: Pre-tied bow that contains a twist tie attached to the center of the bow for adhering to packages.
- Bow Measurements: Bows are measured by Diameter of actual bow, how many loops make up the bow, size of ribbon used to make the bow, and tail length (where applicable).

Styles / Types

Star Bows (Shaped like a star with distinctive points)

Butterfly (Shaped like the wings of a butterfly)

Confetti/Diamond (Shaped more circular with minimal distinctive points)

Pom (Shaped circular with no distinctive points)

Custom Printed Packaging

Introduction

Retail packaging salespeople will find that selling custom printed items is a good way to:

- Increase total sales
- Increase the dollar amount of each sale
- Increase customer loyalty
- Increase personal effectiveness as a sales person

Retail packaging can be customized by means of flexographic, rotogravure, offset imprint, hotstamp, and embossing or debossing. The method chosen to accomplish the customizations depends upon a number of factors including the technical nature of the artwork, the number of colors, the overall percentage of ink coverage, and the quantity.

This section of the training manual contains information to be used by the Retail packaging sales person for printing on a variety of packaging items. Understanding and using this Information will provide a broad based working knowledge for all retail packaging sales persons.

Benefits for Customers

Just like selling anything, sales people who sell the benefits to customers will sell more.

Advertising

The advantage to the customer is the advertising power a printed item has. Many retail packaging items are used again and again. It is not uncommon to see bags or boxes at the beach, the zoo, or anywhere that you see people. The number of potential customers who see these items is unlimited. Sales people can develop individual presentations to show the potential number of customers who will see the printed item and how many new sales that could create for the customer.

Custom Printed Packaging (Continued)

Image

Selling a custom printed item will appeal to a customer's sense of pride. A certain amount of pride is involved in creating their logo. Use this to get them to buy custom printed packaging.... It's like seeing their name up in lights.

Flexibility

The customer will be able to choose variations that they may not have been able to choose if they were to continue to buy stock, or unprinted packaging. They may be able to get a different thickness, color or material that is not available otherwise.

Benefits for Retail Packaging Salespeople

- **Reorders**
  - After a customer has gone through the process of having their packaging customized, it is more likely that they will continue to buy these than go back to buying plain ones.
- **Customer Retention**
  - It is harder for a competitor to come in and get the business:
    1. Because the customer has paid for a plate
    2. Because of the process the sales person goes through to sell these items, the customer considers the sales person more of a consultant than just another salesperson who doesn't care about the customer or their business.

Custom Printed Packaging (Continued)

A sales person calls on an account that wants custom printed packaging, what next?

The answers to the following sales questions will help the sales person determine the type of product to be sold.

1. What is the customer going to use the product for?

Determine the type of image the customer is going for, their budget, and the color theme that they are using. By finding out this information, sales people are able to get customers exactly what they want with the look they want.

2. How many will they want?

The answer to this question will be determine which manufacturer to go through. Manufacturers vary in the size of order they take. Some specialize in small orders and some only do large volume printing.

3. What kind of product do they want?

There are variations in all types of retail packaging. A few possibilities are:

- Custom Boxes - Do they want apparel, gift or jewelry, folded or rigid setup.
- Plastic Bags - Do they want low-density, high density or a blend. There are many handle variations to choose from as well. Shopping Bags - Do they want a kraft paper, gloss or laminated. Labels - Do they want printed, foil stamped or a combination of the two.

4. What size does your customer need?

Often with custom printed items, sales people may ask for a special size that is not available in a stock item. Specific dimensions are very important when getting a quote on printed items. The variance of even 1/2" could affect the price dramatically.

5. What color or finish does the customer want?

Manufacturers may carry a variety of colors in stock. If the customer requires a special color that is not a stock color for the manufacturer, the sales person may have to get a quote for that color. There may be certain requirements that need to be met regarding the quantity needed for a custom color or the sales person may have to look for another manufacturer that carries that color.

Custom Printed Packaging (Continued)

6. What color of ink, how many colors and how many sides does the customer want printed?

Each manufacturer will have their own abilities to print a number of colors. Check with the manufacturer to see how many colors and how many sides they can print. This is normally written 1C/1S (one color of ink printed on one side).

7. How thick does the bag or the box need to be?

Depending upon what is put into the bag or the box, determines how thick it needs to be. Sales people can show samples of different thicknesses so customers can choose what they want. Manufacturers can also provide additional suggestions. Thickness is very important so sales people must be specific. The thickness or gauge of the item will affect the price being quoted. If competing for this business, it is very important to know what the competition is quoting. Plastic bags are measured in mils or microns, paper bags are measured in basis weight, and boxes are measured in calipers. A micrometer is useful in measuring thickness.

8. What kind of artwork does the customer have?

Most manufacturers require camera ready artwork to size. If there is more than one color to be printed, the colors need to be separated out. Part of the selling process may be to help the customer develop and obtain artwork. It is useful to either work with an in house art department or to form a relationship with outside artists. See section on artwork for more information.

9. When does the customer need the order?

This is a very important issue to address with the customer. A lead time may be six to eight weeks for example. Lead time from a manufacturer will begin when they receive a signed proof of approval. There have been many sales people who have misunderstood this and quoted too short a lead time beginning from the time they took the order.

When the questions above are answered, the sales person can get a quote from a manufacturer for printed items.

Printing Methods

Flexographic Printing

Definition of Flexographic Printing:

Flexography is a method of direct rotary printing that uses resilient relief image plates of rubber or photo polymer material. The plates are affixed to plate cylinders of various repeat lengths, inked by an ink-metering roll that carries a fast drying fluid ink to plates.

Flexography is a rotary printing method. For every revolution of the printing plate cylinder, an image is produced. Three common types of presses used are: stack, incline and central impression. These plates print onto virtually any substrate, absorbent or nonabsorbent. The heart of flexographic printing is its simple inking system.

Advantages of Flexographic Printing

1. It can print on a wide variety of absorbent and nonabsorbent substrates.
2. It uses fast-drying inks, whether solvent, water-based or ultraviolet (UV) curable.
3. It can print wet ink over dry ink allowing crisp registration.
4. It uses resilient rubber or photo polymer printing cylinders that will print millions of impressions.
5. Printing cylinders can be taken out of the press to enable printing plates to be mounted and proofed as pre-press operation.
6. Presses can accommodate a wide range of cylinder repeat lengths to match customer printing requirements.
7. It can print continuous patterns.

Rotogravure Printing

Definition of Rotogravure Printing

Rotogravure is a form of intaglio (cut-in or sunken) printing and prints directly from cells engraved into the printing cylinder the true Intaglio or steel-die process prints from sunken lines or grooves that are connected and cross each other. In rotogravure, cells are interconnected so a checkerboard or saw tooth pattern shows up around printed edges; a dead giveaway for rotogravure printing. Because of it, very fine screen sizes are used to make the edges as inconspicuous as possible. For example, paper currency is printed from steel dies capable of reproducing fine lines that the processes cannot duplicate.

The cylinder's print surfaces are etched as microscopic, cup or bucket like cells, while the non-print areas remain untouched. The larger and bolder the copy or image, the deeper the cells. Fine tonal areas have smaller cell or bucket size and depth.

Rotogravure inks are fluid and have very low viscosity. They are formulated on pigments or resins dissolved with solvents or water. Color printing is accomplished by using separate printing cylinders for cyan, (blue-green) magenta, (red) yellow and black inks.

Advantages of Rotogravure Printing

1. It is used for high quality print fine line work and half tones at relatively high speeds with run lengths into millions of impressions.
2. It is used for specialty printing applications where high quality and a perfect image is necessary as in gift wrap, imported plastic bags and magazines.
3. It is used for printing a wide variety of textures and patterns on decorative materials. Most of the simulated wood grains on inexpensive furniture are printed by rotogravure.

Offset Printing

Definition of Offset Lithography Printing

In the offset lithography printing process, ink is transferred from a plate to a rubber blanket which, in turn, transfers the image to the surface being printed.

Water used in the offset process can cause problems if the critical balance between water and oil based inks is not maintained. Thus the dry offset plate system is used to eliminate the need to dampen the plate with water.

Today's modern offset presses range in size from small, sheet fed presses used to print one color jobs to web presses that can print millions of copies of magazines, catalogues and packaging materials in full color. No other printing process has such a broad range of applications.

Advantages of Offset Printing

1. Superior print quality often used when attempting to reproduce photographs.
2. Offset printing is generally used for short runs of sheet fed material in the retail packaging industry. Most common would be euro-style shopping bags.
3. Offset printing plates are the least expensive printing plates.

Screen Printing

Definition of Screen Printing

Screen printing or screen process printing, originally known as silkscreen printing, first appeared in ancient China, where silk was abundant. The process mainly involves forcing ink through a porous screen stencil to a substrate beneath. A squeegee made of wood or rubber is used to push the ink.

Advantages of Screen Printing

1. The main advantage is its versatility
2. Ideal for short-run printing jobs.
3. Multi-color printing available on short runs.
4. Through the use of specially built jigs and printing frames with flexible screens, the process can be used for course fabrics such as garment bags and canvas tote bags and for irregular surfaces such as tubes and bottles.

Hot-Stamp Printing

Definition of Hot-Stamp Printing (Printing with Foil)

A process in which a metal printing plate is inserted into a press. Through heat, the image on the plate is transferred from a roll of foil onto the product being printed. This process is used by many printers for gift boxes, ribbon, plastic bags, paper bags, shopping bags, gift labels, stationery, envelopes etc. The cost of plates is relatively low and the quality of the print is excellent. Because hot-stamping is often a post print method, it is popular for short runs.

Advantages of Hot-Stamp Printing

1. High quality print copy.
2. Low-cost plates.
3. Choice of many colors.
4. Used on just any printable surface.

Applications

Gift Wrap & Tissue

Gift wrap and tissue are usually printed by one of two methods, Rotogravure or Flexographic. Printing plates usually run $1200 to $1500 per color in rotogravure and are generally used for long run-applications. Flexographic plates usually run from $250 to $750 per color and are designed for shorter runs. Both gift wrap and tissue may be printed up to eight colors by some manufacturers.

Printed Ribbon

Printed ribbon is generally hot stamped for most applications. However, for long-run applications (runs over 25,000 yards) ribbon may be printed just like gift wrap on flexographic or rotogravure presses.

Zipper Garment Bags

Zipper garment bags are printed in a variety of methods. If they are printed after they are sewn, they can be printed by silk screen or hot stamped. The area to be imprinted on these bags is generally limited because of the way the bag has been folded by the manufacturer. On bags printed before they are sewn, printing can be placed just about anywhere on the bag. If a bag requires an allover print, the material must be printed before the bag is made by either a rotogravure or flexographic process.

Labels

Labels are printed in a variety of methods. The most common methods are flexographic printing, hot-stamping on foil, chrome or litho material. Labels are also printed on seal presses, capable of printing and embossing at the same time. Embossing is a method of raising the material upwards, whereas debossing is just the opposite. This method is used generally on foil applications but is not limited to foil. Labels are also printed for long run applications by flexographic, rotogravure and letter press. Labels are sold by the square inch or per thousand labels. Butt-cut labels, that is one label next to the other, are sold by the square Inch and are generally used as economy labels. Diecut labels are generally sold per thousand rather than by the square inch. Diecut labels come in a variety of sizes and shapes, both custom and stock die shapes depending on a manufacturer's capabilities. Custom die shapes and sizes are often available at a modest cost.

Applications (Continued)

Plastic Bags

Options Available

Plastic bags come in many sizes and colors, when ordering a custom bag, different sizes are more readily available than if it were just a stock item. Plastic bags may be printed using flexographic or rotogravure plates.

Check with the manufacturer on limitations they have regarding printing on the bags. Some manufacturers will be able to print in the gussets and do a 100% ink coverage. Some manufacturers will be limited in what they can do. Some will be able to print a 55 line screen and others will be able to print up to an 85 line screen.

Post Printing

Most plastic bags are printed during the production of the bags. Some bags may be printed during a process called post printing, i.e., the bags are made and then printed in a separate process. Post printing is often done by a post printer and not by the manufacturer of the bag. When post printing a bag, there will be more limitations than on bags printed during production. Plastic bags that will be post printed need to be treated electrostatically in order for the ink to adhere to the plastic without ruboff. Post printers may have specific requirements for the amount of fine lines, solid panels of ink and registration. Check with the post printer for their particular limitations. Generally, post printers will be able to print within certain areas that won't interfere with gussets and handles.

Pricing

Bags are generally priced per thousand with extra charges for plates and artwork. Freight may or may not be built into the price of the bag.

Overrun-Underrun

During the production of a custom printed bag, there may be more or fewer produced than was originally ordered. This is called an overrun or underrun. This can be as much as 30% and as little as 5% depending upon quantity and manufacturing. Check with your manufacturer for their overrun-underrun policy. The general rule is to pay for what is received.

Applications (Continued)

Polyfilm Movement

This is important because the film may move during the printing process, altering the position of the printed image. Most manufacturers will have a specific range of acceptable movement of at least 1/16" or higher. Check with the manufacturer for their guidelines. This is especially important when printing more than one color to achieve optimum registration. Polyfilm may wrinkle as it is printed. The print will look like the ink has missed a spot when printed over a wrinkle or crease. The thinner the film, the greater the possibility of creasing or wrinkling.

Artwork Placement

The sales person needs to be knowledgeable of the most effective positioning of the print copy. Allow enough room for merchandise to be put into the bag and still allow the copy to be seen. Copy placed too close to the bottom of the bag will often be hidden when merchandise is in the bag. Likewise, copy placed too high up on the bag will interfere with the handle. A good way to show a customer what their bag will look like printed is to enlarge their copy and tape it onto a bag of the size that they are ordering.

Ink Coverage

The manufacturer will need to know how much ink will be printed on a bag In order to provide an accurate quotation. One way to visualize this is to imagine that all the ink printed on the bag was pushed together into a corner of the bag. How much of the bag would be covered? Quotes are generally given with up to 25% ink coverage, 25-50% ink coverage, etc. Depending upon the manufacturer, printing can be done over the entire bag or within certain areas. Each manufacturer is different. Become familiar with the exact specifications of the manufacturer.

Ink colors will change when they are printed on different colors of film. Just like making new colors by mixing different colors of paint, so will the ink color on a bag appear different. For instance, red ink on a black bag will look far different than red ink on a white bag. Some things to remember:

1. If printing on a dark bag, a light color ink will show up better.
2. The greater the contrast, the better the color will show up.

Applications (Continued)

Ink Coverage (Continued)

Panel print or tint block is a solid block of ink. Because the substrate may affect the appearance of the ink color, a panel print or 100% reverse print may be the only way to obtain the desired color combination.

Garment Bags on a Roll

Garment bags on rolls are normally made from low density polyethylene. Most of the general rules that apply to plastic bags, apply to Garment rolls.

Garment rolls are generally printed flexographically either with spot print or random print.

Spot Print

The position of the copy on the bag is in the same place on every bag. Some manufacturers do more than one spot print on a garment bag. Check with the manufacturer for minimums on spot printing.

Random Print

The position of the copy will repeat itself over and over again along the length of the bag. The copy may be cutoff on the top or bottom of the bag depending upon where the copy hits the bag at that point. This is a less expensive method of printing. Again check with your manufacturer on limitations. Most manufacturers carry rolls of standard length. The number of bags on a roll depends upon the length of each bag. Check with the manufacturer on their specifications for the number of bags per roll.

Applications (Continued)

Apparel and Giftware Boxes

Most manufacturers utilize flexographic printing when printing gift boxes. This method provides a means of economically printing the greatest area of ink coverage in a production setting when a large volume of boxes is needed. The number of colors that a manufacturer can print for any one job is determined by the number of print stations on their printing equipment.

Offset printing is less commonly used to print boxes. This method is usually implemented to achieve a high quality imprint which often involves photographic reproduction, where trap lines must be exact. In order for offset printing to be cost effective, higher quantity runs are generally required.

The print coverage area for both flexographic and offset printing includes the top, bottom, sides, and interiors of the boxes due to printing being done before conversion. This also means that artwork can be printed to bleed off the box surface area to achieve maximum use of the print area. These printing methods allow for the use of heavy ink coverage as in 100% tint, an overall design, or a random repeat. Additionally, the flexibility that these surface area options offer is the ability to select a distinct print position, such as a logo positioned on the side or interior of the box.

This process lends itself well to jobs where the quantity of boxes is low, the goal of the customization is to create a high quality image, and where post printing is a possibility. The reason that it is recommended for lower quantity jobs is that this is a slow process. Each box is individually fed into the hot stamping equipment and then individually hot stamped. This intensity of manual labor drives the cost of printing up on a per box basis, but the fact that a lower quantity can be customized may provide that customer with a better imprint at lower overall job cost.

Another factor to consider regarding hot stamping as a printing option, particularly when post printing, is the sweet spot. This is the area that is ideal for printing due to the fact that only one thickness is underneath the print area in contrast to the other areas where the sides of the box have already been converted and folded underneath the top of the box.

Applications (Continued)

Embossing and debossing can be done as a separate method or in connection with printing or hot stamping to achieve a three- dimensional effect. Embossing without the use of additional printing to call attention to the design is referred to as blind embossing. This creates a subtle effect for customers that want to gain the advertising benefit of having their name reflected on the box, without offending their customers by the design being too pronounced. When combining embossing with color imprint, the impact of this effect is dramatic and ver upscale.

Shopping Bags

Roll Fed

The printing of shopping bags from roll stock, (as distinguished from sheet fed, for our purposes) is almost entirely done flexographically.

Many factors impact on the quality and nature of printing shopping bags. The type of paper being printed plays a significant part in the final print quality. Kraft papers, both bleached and natural are more porous than clay coated stocks, which cause inks to be absorbed by the paper fibers and spread, reducing the sharpness of the print. Conversely, clay coated papers afford a smoother printing surface which hold the printed image better than krafts.

Another factor in printing quality is the type of printing plates used. Natural rubber plates tend to be softer, and can move during printing. The newer photopolymer plates have a firmer surface which is an important factor in holding tight registration and printing finer screen patterns.

Domestic flexographic printing capability falls into three broad categories; **pre-print, tail-end** and **post print.**

Applications (Continued)

Preprint

Most shopping bags made in North America are printed from roll stock. These large rolls of paper are mounted at the back of the printing press and pass through one or more printing stations as required for each color and varnish application. Preprint, as the name implies refers to printing the paper prior to the making, or conversion, into the finished product. This method is generally used for longer runs, multiple color designs, tight registration designs and usually uses a central impression press. In addition, screens of higher dot resolution, some reaching 133 line screens, are available using central impression presses. This allows the tight registration printing necessary for process printing.

Tail-End

Tail-end, (also known as inline), printing refers to the combination of printing and conversion on one machine. The roll stock is mounted on the back of the machine, and is printed and converted into finished (or nearly finished) product in one operation. By its nature, shorter runs and simple designs are commonly done on tail-end equipment. The stacked presses used on most tail-end bag machines do not allow registration closer than a 3/64" and often not closer than 1/4". Designs with screens are generally limited to 55 or 65 line resolution.

Post Print

Post printing literally means printing after the manufacture of the bag. Typical methods of post printing are flexographic, hot stamping, letterpress and silk screening. Post printing is often used for small quantity orders.

The handles, the bottom and the side gussets interfere with the print area of a shopping bag. The unobstructed area is known as a sweet spot. This sweet spot can be as small as 3"x4" on small shoppers, and usually no larger than 9" on large sizes. This is not to say that bags cannot be printed over the gusset folds, but many designs are made difficult by the changing surface levels in these areas. Designs with heavy ink coverage, and designs with boarders are particularly tricky to achieve in post printing. Two color designs, while not impossible, are very difficult, and designs requiring tight registration are extremely difficult.

Applications (Continued)

Post Print (Continued)

Flexographic post printing uses rubber or photo polymer plates. All of the inherent limitations of preprinting and tail-end printing are applicable, and are joined by the further limitation of screen use, bleeds, and inability to print two sides. Because many post printing presses have no drying equipment, coated and varnished shoppers are difficult to post print.

Hot stamping is even more sensitive to varying levels under the print surface. In addition, the printing substrate is also a factor. Kraft paper is a difficult surface for many stamping foils to adhere to and some foils cannot be used. Coated bags usually are better surfaces for foil adhesion. Conversely, laminated shoppers can be hard to stamp. Heavy foil coverage can leave bubbles because the surface traps air between the foil and the laminate.

Letterpress printing on shopping bags is also limited by varying levels under the print surface. This is somewhat offset by the pressure that the mounted plate uses, but that same pressure can disfigure and even cut the bag surface.

Silk screen printing on shopping bags is limited, again, by the same factors. This method is not widely used on shopping bags because of the higher cost of silk screening.

Sheet Fed

Sheet fed shopping bags, sometimes referred to as "Euro-totes", are defined here to point out the difference in printing capabilities on this product, not the added value options of special handles or lamination, which are often available on roll fed shopping bags.

Sheet fed printing presses are generally offset lithographic presses, not flexographic presses. The distinction is important for the quality of printing available on these presses. Some of the limitations of flexographic printing are not found in offset printing. Dot gain, halos, traps and fill-in are not problematic. Photographic reproduction, inline embossing and hot stamping are available on these presses. It should be noted that offset printing is a more expensive method and should be utilized as the design dictates.

Applications (Continued)

Merchandise Bags, Grocery Bags and Sacks

The printing of serrated edge merchandise bags, grocery bags and sacks is almost exclusively done flexographically on roll fed bag machines with tail-end printing stations. Because these are in-line presses rather than central impression presses, the ability to hold registration is limited to 1/8" to 1/4" trap, 42.5 to 55 line screens, and subject to the typical fill in, dot gain and halos of flexographic printing. Overall designs can be printed on roll to roll presses, and then converted on the bag machine, with or without an overprint.

Post Print

Post Print Serrated edge merchandise bags, grocery bags and sacks are post printed by hand fed flexographic presses, hot stamped, letterpress and silk screening. The same capabilities and restrictions of shopping bags are found in merchandise bags and grocery bags. See the section on shopping bag post printing.

Art Preparation

In the manufacturing or printing process, accuracy can only be accomplished if clear and concise details are given on the sales order. Without complete and accurate specifications being defined at the time the order is written, mistakes are sure to occur.

Even long-time retail packaging sales people sometimes omit an important detail that can be costly and time consuming to correct. To help keep those errors to a minimum, a check list and specification sheet will help remind a sales person of those details, and will better communicate to order-processing departments exactly what the customer wants.

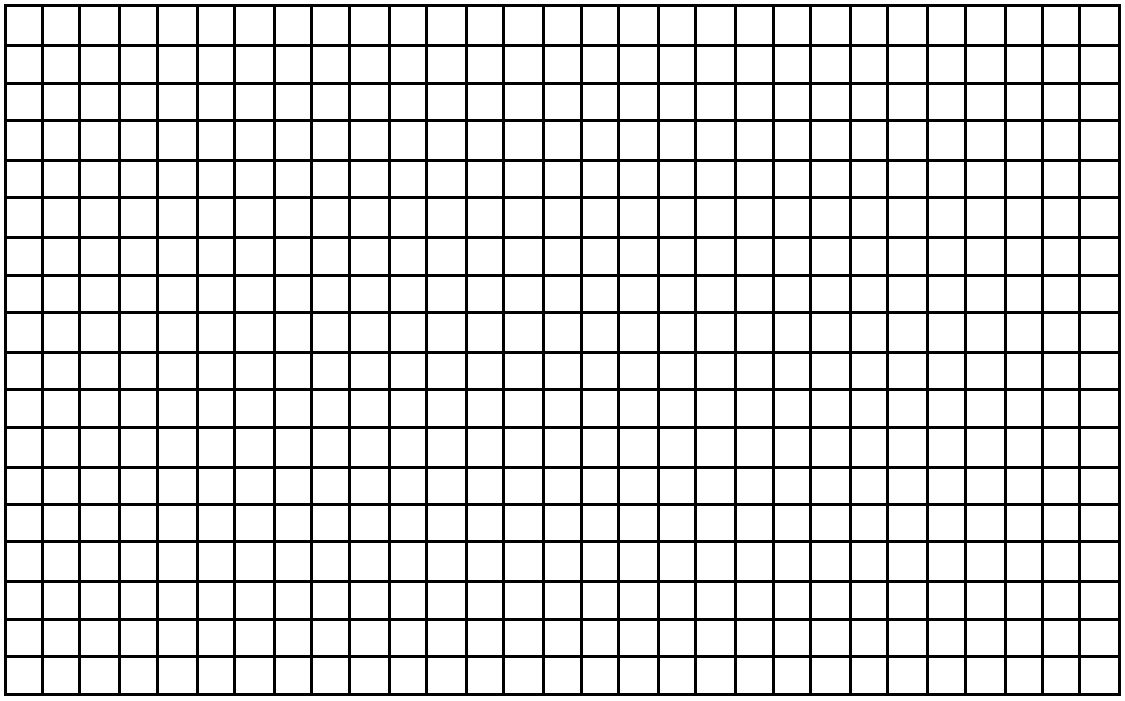
Printed Order Checklist

1. Customer name, shipping and billing address, phone and fax number
2. Item Quantity
3. Item price (indicate with or without imprinting
4. Freight (if not included in the selling price)
5. Size (list item dimension in the correct order)
6. Handle style/color (if applicable)
7. Film gauge or basis weight of paper (if applicable)
8. Color of item (use vendor's color name)
9. Ink or hot stamp color (use vendor's color name and or PMS)
10. Number of sides to be imprinted
11. Other charges (i.e., excessive ink, special ink match, split delivery, color change, etc.)
12. Art and/or preparation charges (may Include logo design, design reproduction or printing plate cost)
13. Specifics of print copy (use spec sheets)
    a. Exactly what drawing or word copy is to be printed
    b. Type styles (fonts) to be used (be specific - various styles each have a name like Helvetica or Park Avenue; the terms "block" and "script" are not styles of type)
    c. Caps and or lower case letters (which letters are to be capitalized and which are not)
    d. Position of all print copy on the product
14. The date by which delivery is required
15. Vendor name, quotation number and date
16. Specify if proof approval is required (Companies may not have a policy when proofs are to be submitted to the customer for approval. It is suggested that obtaining proof approval be a routine part of processing printed orders. If the customer prefers to skip the proofing step, the manufacturer may require that the distributor sign a proof waiver form. Be aware that in waiving the right to a proof, the distributor may also be forfeiting the right to any claim if the product is not produced correctly.
17. Attach copies of art, spec sheets and/or samples of the product being duplicated
18. Authorized customer signature
19. Credit approval

Printing Specification Sheet

CUSTOMER NAME _____
VENDOR NAME _____
TYPE OF PRODUCT _____
SIZE _____
SUBSTRATE _____
PRODUCT COLOR _____
HOT STAMP COLOR _____
INK COLOR _____
NUMBER OF INK/HOT STAMP COLORS__
NUMBER OF SIDES TO PRINT _____
HANDLE STYLE _____

ORDER NUMBER _____
QUOTE NUMBER _____
LABELS: DIE SHAPE _____
BACKGROUND COLOR _____
BORDER COLOR _____
LOGO COLOR _____
BORDER TO BE INSET _____
BORDER TO BE BLEED EDGE _____
NO BORDER _____
HOW MANY SIZES OF PRINT COPY ARE TO BE USED _____



Art Preparation (Continued)

Art Preparation

Top quality print jobs can only be obtained if the art from which the printing plates are made is clean and crisp. Poor quality art can only result in poor quality printing no matter what product or printing process is involved.

Clean art means:

- No jagged edges on letters or in the design -- every line is smooth and sharp
- No letters and no parts of the design are filled in -- all openings are wide and clearly defined
- The background Is white -- there should be no smudges, specks or dots

Clean art is usually referred to as camera ready art. Customers may often think that the term artwork means actually creating a design or logo. Artwork is an existing design that is clean enough from which printing plates can be made. Usually a copy made on a copy machine is not clean enough to use as art work.

The term's velox, slick, or black and white are normally used to mean a professionally prepared reproduction of a design. Most professional print and commercial artists can provide a velox or slick; however quick printers may not have the ability to give anything but a copy machine reproduction.

If a customer wants to provide a piece of stationery, a business card, a photograph, a check or some other item that has been printed with the correct print copy, be advised that these are not acceptable as artwork These Items can only be used to show what words are to be in the print copy, what style of type are to be used, what design is to be included and how the lines of type are to be printed in relation to each other. Camera ready art will have to be prepared from this business card or stationery.

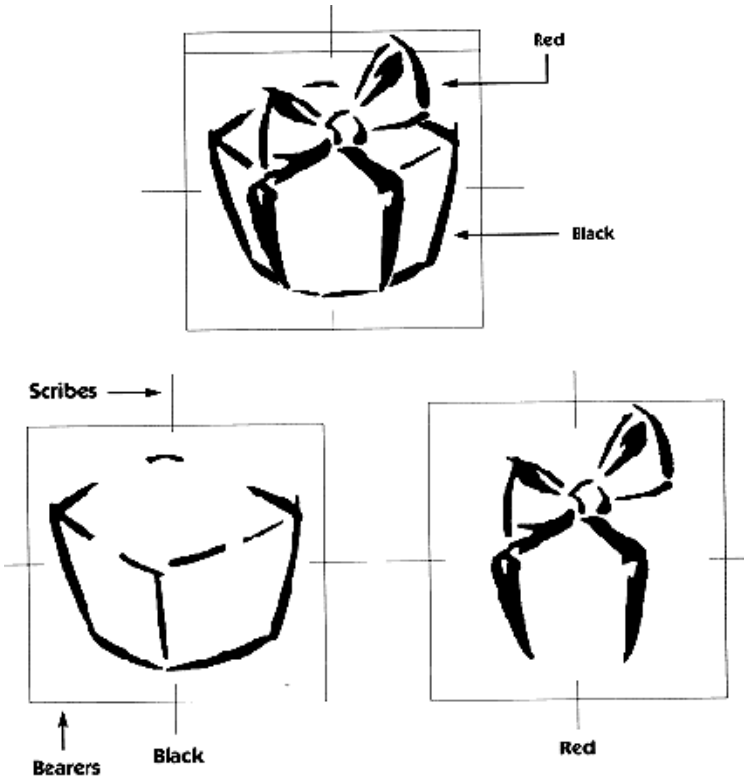
It is best to have artwork prepared as large as it will be on the printed product in order to avoid additional art charges. If the art provided is smaller than it will be on the finished product, enlarging it may cause the edges to become jagged, spaces may open up, and the art no longer be clean.

Art Preparation (Continued)

Art can be submitted on a board with the appropriate markings called scribes and bearer marks to indicate copy position and color separations. Below is an example of a two color design both as a composite and with the colors separated. The scribes and bearers help to insure accurate reproduction of the design.

Color Separated Diagram

Composite (Both Colors)



Bearers should be 1/2" away from the edges of the image in each color separation and scribes should indicate the center of the composite Image, therefore they should line up when overlapped.

Art Preparation (Continued)

There are a number of terms that are common in the graphics field, but may be totally foreign to the sales person who isn't experienced in printing. It is the distributor's job to understand what the customer wants and to communicate that information to the manufacturer. Consequently, it is imperative that sales people learn the correct terminology for the components of the product and for the art/printing specifications Getting in the habit of calling it what it is, (using the correct term), results in fewer mistakes. Be sure to refer to the glossary and become familiar with the terms:

- Bleed
- Positive Print
- Screen
- Color Separation
- Reverse Print
- Trap

Art and the Computer

As we approach the 2lst century, the computer has become a mainstay in the development and preparation of art required in selling and manufacturing printed packaging.

Many people are intimidated by the computer and the language that is has inspired, but it's here to stay and some familiarity with computer generated art is a must. Below are a few points that might be helpful.

The Macintosh system seems to be the most commonly used in the graphics industry. It's user friendly and offers the most compatibility with systems used by artists, designers, service bureaus, advertising agencies and retail packaging manufacturers. There are a variety of art related software programs available but some of the most common used ones are:

- Adobe Photoshop
- Adobe Illustrator
- Adobe Streamline
- Macro Media Freehand
- Quark Express
- Pagemaker

Art Preparation (Continued)

In conjunction with the appropriate software, the right printer must be utilized. A high resolution laser printer, preferable 1200 DPI (dots per inch) using high quality white paper, as opposed to copy machine paper, is best to obtain clean art.

If art is supplied on a computer disk, it can be sized as needed. Contact the manufacturer prior to art being prepared because each manufacturer's software may be different. Clarify what charges, if any, will be incurred in taking the art from the disk and converting it to a hard copy. It is advisable to include with the disk a hard copy of the design contained on the disk. A clear print out of the design will make sure that everyone knows what it is supposed to look like.

Proofing

Proofing is the best way to insure that a can see as closely as possible, what the finished product will look like. It is essential that the spelling be correct, but it is equally important that the customer have the opportunity to approve the size of the print copy and how it is positioned on the product.

For customer and distributor protection, it is advisable to submit a proof for customer approval.

Even if a customer asks to waive the right to a proof in order to speed up the production process, DISCOURAGE them from doing so. Customers will only be disappointed for a short period of time if a printed product is slow in arriving. They won't ever forget that a sales person sold them something that wasn't exactly as they wanted. A proof will often protect everyone involved from potential problems.

A proof is usually a Xerox type copy of the design which has been correctly sized and positioned on the actual size bag, box, label, etc. This allows the customer to see what most people don't have the ability to envision, such as how big the name should be, how far from the top or bottom the logo will look best, etc.

Art Preparation (Continued)

Along with the proof, it is best to also include color samples of the product and of the ink or hot stamp colors. When the ink or hot stamp color is shown on a sample of the actual film, paper, or board color, it is called a drawdown or rollout. Most manufacturers will provide drawdowns upon request.

Occasionally, the customer may want to see real samples of the product being ordered. Product samples are usually one or two examples of the actual manufactured products, which are submitted for approval before the entire order is run. Typically, a production sample is run on large orders or when the manufacturing or printing specifications are complicated. Because time consuming machine set-up is required, most manufacturers will charge for production samples. It takes just as long to set up the equipment to run two of an item as it does to run 200,000 of that same item, so the cost of a production sample may be several hundred dollars, if the manufacturer is willing to provide it at all. Requesting a production sample is definitely the exception, rather than the rule, so be sure to discuss this with the manufacturer before making a commitment to provide a production sample to the customer. There may be other alternatives that can help the customer feel confident that the end product will be exactly as they wanted it.

It is suggested a proof approval form accompany every proof submitted to a customer. This form should emphasize that the customer is to check the proof carefully and advise in writing of their approval or desire to make changes. An authorized signature should be required on all final proofs.

Proof Approval Form

Enclosed is the proof for your order of _____

_____

_____

Please check spelling, style and arrangement carefully and indicate any changes or corrections in the space provided below. If the proof meets with your approval, please sign and date this form in the appropriate place. Then return the proof and this form to us at the address listed above THE PROOF MUST BE RETURNED.

If there are any questions, please contact us.

Estimated art and prep charge: _____

_____This proof is approved exactly as submitted

_____This proof requires changes as indicated below please make the necessary changes and proceed. A REPROOF IS NOT REQUESTED.

_____This proof requires changes as indicated below. Please make the necessary changes and SUBMIT A REPROOF.

PLEASE MAKE THE FOLLOWING CHANGES

_____

_____

_____

_____

SIGNATURE AND DATE _____

Glossary of Terms

Apparel box – Boxes designed to hold apparels: shirts (15 x 9-1/2 x 2), dresses (19 x 12 x 3), etc.

Bearer edges – Also known as bearers, a box or border around the image of camera ready art used in the plate making process.

Beers style box – also known as a "pop-up" style. A glued box construction often used in apparel sizes and other shallow sizes.

Bleed – The printed area on a mechanical layout which extends beyond the visible print area.

Blind Embossing – an image produced by raising the surface of the substrate using a heavy metal plate. The image in blind embossing has no pigment added. Also see embossing and debossing.

Bridge handle (rigid) – A style of rigid handle (plastic bag) which is held by the fingers and often has a snap closure.

Camera ready art – Properly prepared artwork, literally ready for the camera to make plates or other reproductions.

Central impression press – A flexographic printing press using a large central drum surrounded by multiple printing stations.

Cotton filled – A set up box with cotton inserted. Jewelry boxes are usually cotton filled.

Custom – Any item made to a customer's specifications other than standard product available.

Debossing – The opposite of embossing. An image created by pressing into the substrate below the surface level. Also see embossing and blind embossing.

Die cut handle – A handle formed by cutting into the substrate. Typical materials that are die cut are high and low density plastic or paper.

Drawdown – An ink swatch laid down on the printing substrate for purposes of color matching.

Drawstring handle – A handle or closure formed by the use of any string material held in a hem of the bag material. Typically found in poly bags.

Glossary of Terms (Continued)

Double wall – A construction using two layers of a substrate. The most common application is poly bags where the outer wall is usually clear, with the printing on the inside of the outer wall. Also see multiwall.

Embossing – An image produced by raising the surface of the substrate using a heavy metal plate. The image in embossing may have pigment added. Also see blind embossing and debossing.

Euro-style – A shopping bag of high quality, usually having some or all of the following characteristics: lamination, turned top construction, rope handles, cardboard reinforcements and grommets.

Flat bag – A bag construction using no side or bottom gussets.

Flexographic – The use of flexible plates for printing, using rubber or photopolymer material. This is the printing method used on most paper and plastic bags.

Flush-cut bag – A bag construction where the face and bag walls are the same height. This usually refers to poly merchandise bags.

Folded top - A bag constructed with a hem top. In poly bags, this is often used with a die cut handle. In shopping bags, this is also referred to as turned top.

Folding carton – A carton constructed with scored surfaces to facilitate folding into an end use box.

Garment bag – Bags used to cover clothing on a hanger.

Gauge – The thickness of a substrate. Paperboard is measured in points (one point equals one mil), poly is measured in mils (English) or microns (metric). Paper bags and wrap are referred to in pounds (i.e.: 35#)

Giftware box – A box category describing any box generally used to hold gifts and chinaware.

Gift wrap – A decorative material used to wrap gifts. Coated and uncoated papers, tissue paper, poly films, mylar films and other materials are typical.

Grocery bag – A bag with a flat bottom usually made of paper. Also called

SOS bags.

Glossary of Terms (Continued)

Gusset – A pleat or expansion in the side or bottom of a bag.

High density – A type of polyethylene with a high molecular weight which gives it strength.

Hot stamping – A printing method which transfers pigment from a film surface to a substrate using heat and pressure.

In-line – The printing, manufacture and conversion of a retail packaging product on machine in one operation.

Jewelry box – A box designed to hold jewelry. Most often a set-up construction, but also made as a folding box, Sometimes referred to as a cotton filled box.

Kraft – Paper or board made from wood pulp used in making bags, boxes, wrap or tissue. Kraft paper can be natural, bleached or dyed to a color.

Laminated – The use of a thin material to cover the substrate. The use of papers, films or foils on boxboard is also referred to as lamination.

Litter bag – A bag style, usually poly, and with a die cut hand hole specially made to hold trash in automobiles.

Lock corner – A box style using manual tab and slot construction.

Loop handle – A style of (poly bag) handle designed to be held over the wrist. May be soft loop or rigid style.

Low density – A type of polyethylene with a low molecular weight giving it its soft appearance and feel.

Merchandise bag – The general category of notion and millinery bags.

MF – Or machine finished, refers to kraft paper with a rough surface.

MG – Machine finish. Refers to paper with a slight shine on one side achieved by polishing the paper surface during manufacture.

Micrometer – A device used to measure very thin substrates, including poly film, board or other paper products.

Micron – A metric measurement used to describe the thickness of a substrate. One micron is a thousandth of a millimeter.

Glossary of Terms (Continued)

Mil – A measurement (English) used to describe the thickness of poly. One mil is a thousandth of an inch.

Millinery bag – A historical term for any bag used to hold hats or clothing.

Multiwall – A construction using two or more layers.

Natural kraft – Kraft paper not bleached or dyed. Also known as brown kraft.

Notion bag – A general term for any small bag.

One piece box – A box with an attached lid.

Offset Lithography – A method of printing in which the inked impression from a lithographic plate is transferred to a rubber-coated cylinder, and then onto the substrate.

Patch handle – A style of poly bag using a reinforcing patch adhered to the handle area.

Photo polymer – A flexographic printing plate made of a sheet of plastic which is photo etched.

Pigment – A coloring agent.

Plastic draw – A poly bag style using poly strips to draw the bag shut. Also known as draw tape bags.

Point – A measure of the thickness of box board. One point equals one mil.

Polyethylene – The plastic resin usually referred to as poly.

Post print – Printing done after the manufacture and conversion of a retail packaging product.

Preprint – Printing done before manufacture and conversion of a retail packaging product.

Printing plate – A flat material used to transfer ink or hot stamping foil to the substrate. Plastics are often printed with flexible (rubber or photo polymer plates). Boxes are often printed with metal engravings mounted on wood, or hot stamped with heavier gauge metal engravings.

Glossary of Terms (Continued)

Production sample – A sample of the actual manufactured product submitted for approval.

Proof – A Xerox type copy of the design which has been correctly sized and positioned on the actual size bag, box, or label.

Random repeat – A repeated design giving a consistent pattern. This type of design is often printed on gift wrap, tissue and roll garment bags.

Registration – The correct positioning of two or more images in exact alignment.

Rigid box – A box made without folding surfaces. Also known as set-up boxes.

Rigid handle – A hard plastic handle in one of several styles. Also known as snap handle.

Reverse face – A printing plate used to print the inside of the outer wall on double wall bags. Also known as right reading plates.

Reverse out – An image formed by removing the design from a solid background. This camera ready artwork would be white on black, instead of black on white.

Roll fed – A printing press which prints paper or plastic films from a master roll.

Roll out – See drawdown.

Rotogravure – A method of printing using etched cylinders.

Rubber plates – A flexographic printing plate molded from sheet rubber and a bakelite mold. The mold is made from a metal etching.

Screen – A graphic arts term for a dot pattern. The dots are measured by how many dots per inch (resolution), and percent of image (size of dot). The dot pattern can be round or square, vertical, horizontal or diagonal lines, or other configurations. A screen can be used to shade an area or print an image.

Separations – The physical separation of colors in camera ready art. Each color is usually on a separate cell, or overlay, for the plate making process.

Serrated edge (SE) – A paper bag style with top edges serrated, as if cut with pinking shears. This serrated edge is formed by cutting blades during manufacture.

Set-up box – See rigid box.

Glossary of Terms (Continued)

Sheet fed – A printing press which prints sheets of paper or box board.

Shopping bag – A bag with a flat bottom, side gussets and handles attached to the top.

Shoulder tote – A bag with strings, pulls or handles long enough to use as a shoulder strap.

Silk screening – A printing method using a fabric or steel screen through which ink is transferred to a substrate by imparting ink through the unblocked area of the screen.

Singlewall – A bag made with a single layer of substrate.

Side gusset – An expansion or pleat on the side of a bag.

SOS bags – Self-opening style. See grocery bag.

Stacked press – Individual printing stations "stacked" to achieve multiple colors.

Steel die – A cutting device used to create the shape of a retail packaging product.

Substrate – The surface being printed on.

Sweet spot – The ideal area on a bag or box which is easily post printed, stamped or screened.

T-shirt bag – A gusseted poly bag style with strap type handles. Its name comes from its similarity in appearance to a man's sleeveless tee shirt.

Tail end – The forming and printing of bags on the same machine.

Tint – 1. A printed surface covered with 100% ink. 2. A variation of a color by adding white.

Tint block – Similar to a tint (1), but limited to an area of the surface. Usually a square or rectangle shape.

Trap – The amount of overlap needed to print two or more colors in register.

Two piece box – A box with a separate top and bottom.

Turned top – See folded top.

Glossary of Terms (Continued)

Varnish – A clear gloss or matte finish applied over the surface of a substrate to enhance the appearance and/or protect the surface from rub and scratches.

Viscosity – A measure of the flow rate of fluid inks.

Vulcanized cylinder – In flexographic printing, a rubber sleeve cylinder used to achieve seamless designs.

Zipper bag – A style of garment bag constructed with a zipper closure.