

Die Cutting



Working with shape is one of the most creative graphic design challenges these days with the vast potential of die- and laser-cutting available and now that the U.S. Postal Service has loosened the leash on shaped mail regulations.

An invitation shaped like a race car, a mask or a party hat. An announcement that becomes a pop-up chair or opens up to contrasting colors, finishes or photographs. Die-cutting can be as complex as a replica of the White House, as geometric as CD or DVD packaging or as simple as a slit holding a business card in a pocket folder.

How it works

The die-cut process involves a metal tool shaped into a specific form and mounted on a die-cutting press that cuts through a wide range of materials quickly and easily. Think cookie cutter. There are two main types of die-cut presses: hand-fed and automatic-feed. Most automatic feed presses can take a press sheet up to 28 X 40 inches, while hand-fed presses can cut sheets even larger than 60 inches.

Die-cutting includes cutting paper as well as scoring, kiss cutting and perforating, which can be combined into one pass through the press.

Scoring

Scoring minimizes paper cracking by creating a crease that produces a clean, crisp fold. There are two categories of scoring dies: blade scores are sharp and used for Writing and Text papers, while rounded scores used for heavier Cover weights, are blunt and wide.

Scores should run in the same direction as the grain of the paper to prevent additional cracking and if the print is folded in both directions, the score for the primary fold should be parallel to the grain. Letterpress scoring is especially effective to prevent cracks on coated papers.

Kiss Cutting

Kiss cutting is used for labels and decals run on a letterpress or a flexographic press where the adhesive top layer (label) is die-cut and the attached backing sheet is left intact.

Perforating

Perforating (or perfining) is often used for tear-offs, such as coupons that can be easily removed. A series of holes per inch can range from a basic four to seventy-two perforations per inch and even finer microperfining is possible.

By thinking of paper in sculptural terms, you can create an equal balance of open space and paper; a successful combination for a die-cut piece. Be sure to consult with your printer in the early planning stages of the project and provide a sample of the paper you choose. Stock weight, caliper and coating can affect die-cutting and heavy paper texture may be a concern if fibers get loose on either side of the sheet on press.

Dimensional Impact

No matter what your goal for the printed piece is and whether it is shaped purely for function or form, the endless possibilities of die- and laser-cutting add dimensional impact to promotions, envelopes, cartons, labels and as many other projects as you can imagine. Research shows that in today's highly competitive world, an interesting design captures consumers' attention and die-cut is one way to make them take notice.