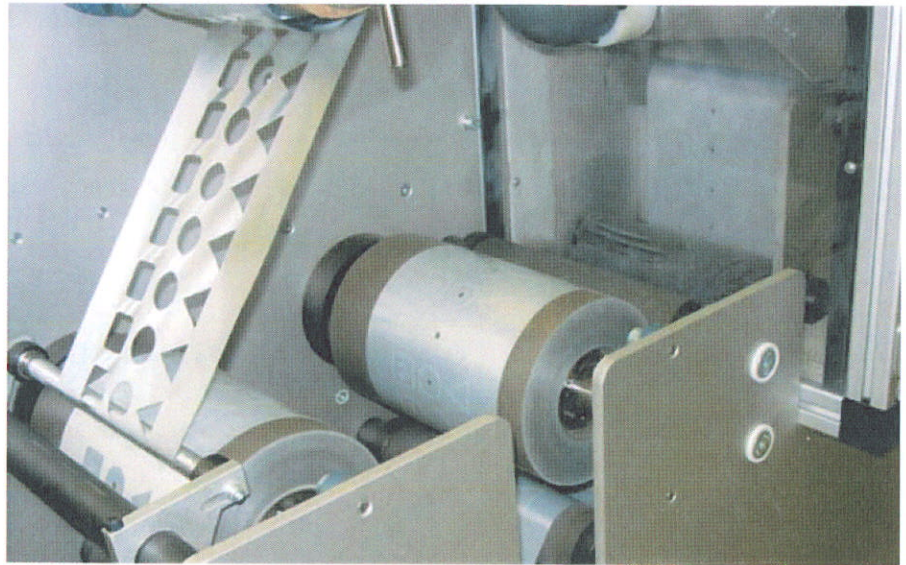


Seizing the Digital Die Cutting Advantage



■ Moving from artwork to finished die cut printed products *within hours* is not a futuristic fantasy. By combining digital printing with digital die cutting, such quick turnarounds readily are doable. In turn, that means that building a niche in rapid prototyping is there for the taking for any digital printer that adds digital die cutting capabilities.

What is "digital die cutting"?

Digital die cutter is another name for laser cutting systems. The laser systems, best suited in conjunction with digital printing presses, are usually galvanometer driven. Galvanometer systems use a stationary laser that shoots its beam through moving mirrors as it angles into the correct position for the desired cut. This is in contrast to a gantry-type laser system, which is an XY plotter whose laser beam is always perpendicular to the piece being cut and moves along the artwork pattern to be cut.

The basic advantage of a laser cutting system is that it provides a tool-free method for cutting. This means that the time needed to create tools is eliminated, as well as the costs of tooling. Unlike tool-based rotary cutters or optically-registered, gap-press cutting systems, the tool-free, digital

cutting systems do not have to contend with the physical limitations inherent in a die. This not only means laser cutting can handle many cut features and do special features such as kiss cutting, but it also expands the range of materials one can cut. Cutting abrasives are newly practical because the problems of abrasives wearing down tools are eliminated. Adhesives are cut without the problem of dies getting sticky from contact with adhesive layers. Very thin, flimsy materials are easier to cut because the problems of edge distortion, from the weight of dies, are eliminated.

Perhaps the most important advantage of tool-free cutting is that set up time is dramatically reduced. Set up is not much more involved than importing a vector-based drawing from some drawing program to the laser-cutting system software. All adjustments are then made in the software, usually in minutes. Tool-based systems, in contrast, often require repeated steps to correctly register dies.

Though it may seem counterintuitive to some, laser cutting systems are in many ways a safer alternative to tool-based cutting systems. The initial installation of a laser cutting system eliminates the chance of stray beams creating workplace hazards if workers do not wear safety glasses. Tool-

The **basic** advantage of a laser **cutting** system is that it provides a **tool-free** method for **cutting**.



By Bill Knotts, Vice President, Sales &, Marketing, Spartamics