

# Integrating Digital Printing Into Your Decorated Apparel Business

*Acceptance of digital printing is growing, but do your homework on the full impact it will have on your business before jumping in.*

I had been screen printing for nearly 30 years—having started in 1976 in high school—when I first began taking a look at digital direct-to-garment technology.

The screen printing business was changing, and one of the biggest challenges was the fact that everyone had become a graphic designer. Anyone could create a file in a publishing program. The quality of art was getting worse by the day. The straw that broke the camel's back was a week in late 2006 where I passed on 25 orders because the artwork was unusable for standard screen-printing separations.

Fortunately, I learned that it is possible to take artwork created in a publishing program, convert it into a JPG and by importing it into a graphics program, it can be converted into something usable for digital printing. So in 2007, I bought my first Kornit 932 Thunder direct-to-garment printer, and then the company acquired the machinery and asset base of another company that also had the same Kornit model. ▶

*Contrary to popular thinking, given that some jobs can be screen printed faster, we don't determine whether a job is going to be screen printed or digitally printed based on the volume. The decision is based on the art.*

So my evolution into digital printing started off quite simply by the fact that there was so much art that was being presented that we couldn't print, but we wanted those orders. And many of those designs were for dark garments creating an even bigger challenge.

Another reason why I felt the need to get into digital printing was, as a screen printer, I was always looking for the next customer. The repeat order rate in screen printing in my experience is about 20% on an annualized basis. So my screen printing business had a core customer base of 20% repeat customers every year, and the rest was a lot of one-off jobs.

Today, I'd estimate that about 65% of my printing business is digital and 35% is screen printing. What determines whether an order is screen printed vs. digitally printed is how much money we can make based on the time and effort that needs to go into preproduction. We would rather not shoot screens to produce a six-color print job of 24 pieces when we can have the job prepped and ready to print digitally in less than an hour after receipt.

#### **Artwork Drives the Process**

Contrary to popular thinking given that some jobs can be screen printed faster, we don't determine whether a job is going to be screen printed or digitally printed based on the volume.

The decision is based on the art. We are finding that 75% of the art we do in-house is for digital printing. Our art department is constantly creating full-color art for our customers who sell at retail. Full-color art is what sells for our customers.

We are looking for fidelity to the original artwork and the digital process lets us accomplish this with greater ease. We are not here to just bang out print jobs. We are able to accomplish things art wise that we can't do with screen printing. Digital printing produces better results, and we are able to control the fidelity to the original piece almost exactly in nearly every case.



**At Blue Heron, 75% of the art we do in-house is for digital printing. Our art department is constantly creating full-color art for our customers who sell at retail. Full-color art is what sells for our customers.** *Photo courtesy of Blue Heron Industries, Little Falls, N.J.*

One of the most important aspects of digital printing is that it uses continuous tone rather than halftones. This means there are absolutely no discrepancies in the art that may be caused by halftones or dot gain in screen printing.

We have adopted a pretty strict order policy where if a customer wants us to screen print product, he must have a vector-based file. All of our CMYK files as well as pixel-based raster files are now digitally printed. We are no longer screen printing any four-color process work under 1,000 pieces.

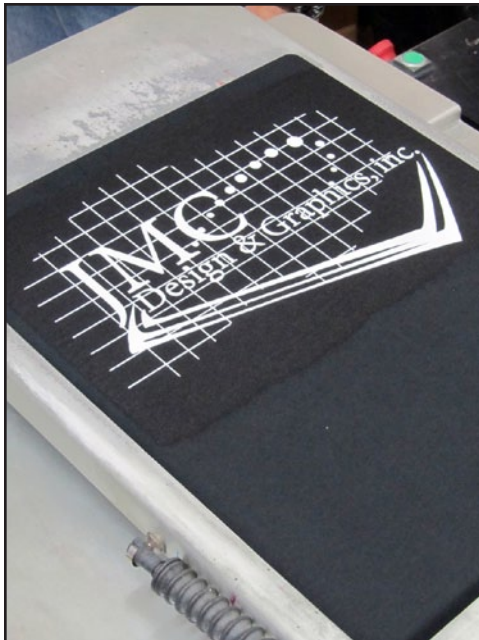
Also, we get a higher dollar yield per digital machine operator than we do in screen printing. In this economy, we like the fact that we can produce significant dollar volumes with fewer employees.

#### **Pricing Practices**

Our digital printing prices are based on square inches, and I think that is a fairly common approach. We also base it on the physical production time. Digital printing is controlled by an XY axis, similar to embroidery. The design's perimeters determine the overall production time for a finished print. A big portion of our cost is time. Time and ink account for about 75% of the cost of production. Fixed costs make up the balance.

There are times when we are forced to be more competitive with our screen printing prices while costs continue to rise. The size of the orders also dictates a lot of our prices. A customer who buys \$300,000 dollars of product a year is on a different price list than somebody who is doing \$3,000 dollars a year. Sometimes the digital printing gets lean, but it never gets as lean as screen printing because the hourly yields and ink cost in digital are a known quantity.

Another advantage our shop has is 90% of what we do is on dark or black T-shirts. Consequently, we have developed a reputation as one of the best U.S. printers of dark garments. We are actually referred to as "the king of digital darks." There is less competition with digital



Approximately 90% of orders at Blue Heron are on dark shirts. With the company's transition to digital in 2007, it consequently has had a lot of experience digitally printing on darks to the point where it has now become one of the company's main areas of expertise. *Photo courtesy of Blue Heron Industries, Little Falls, N.J.*

the public perception of digital printing, because a lot of people are getting products that are substandard.

I think that curing is the number-one problem faced by direct-to-garment printers right now. Our curing practices are exactly the same in digital printing and screen printing. We use gas-fired conveyor ovens for the best results. We do not heat press our goods.

#### Screen Printing Is Still Faster

If I could, I would get rid of my screen printing equipment today because it's a dirty, time-consuming business with ruthless competition. It would be nice to have fewer headaches to deal with. However, you have to be able to get the product out the door fast, and you would need so many digital printing machines to replace the volume for certain types of work.

printing on darks and black in particular. Because the industry is still new, it is a competency and consistency factor.

One of the keys to success is consistency. There are a lot of people who print digital well, but there are not a lot of people who print the same design day after day. We are able to get exactly the same results day after day from our machines. With some of the more sophisticated equipment like Kornit, there are often outside forces such as heat and lack of humidity that come into play. You need to be on your game all day every day.

A lot of people can get an image on a shirt. There are not a lot of people who are consistently getting the image to stay on the shirt. Curing is a major problem in the direct-to-garment T-shirt business. You can walk around an industry trade show and look at everybody's printing and it is gorgeous because everything is rigged to perform at the show.

Then you take XYZ's shirt home and run it through the washing machine, and now you have a T-shirt with no art on it. This has been a major problem with

Also, you can't convert every customer to digital printing. If you are selling somebody a shirt today that is a two-color stock print for \$4, you can't suddenly charge that guy \$7.50. He will go find somebody else to screen print it for \$4.

#### Digital Continues to Gain Ground

Our digital printing increased 100% in 2010, and we believe that our dollar volume will triple by the end of 2011 due to new licensing contracts that we just signed. I attribute that increase to the fact that our customers, some of whom were really skeptical in the beginning, are now comfortable with the process.



**What has made digital printing so attractive is we get a higher dollar yield per digital machine operator than we do in screen printing. In this economy, we like the fact that we can produce significant dollar volumes with fewer employees.** *Photo courtesy of Blue Heron Industries, Little Falls, N.J.*

Our Web presence over the past nine years with [www.gobluheron.com](http://www.gobluheron.com) has really exploded our potential for growth through our on-demand printing services. I'm very fortunate in a sense that people have trusted our guidance as to what medium to use, and that is a big change, because in 2007 that was not the case. You had to explain what digital printing was, and today it is more widely understood by consumers at all levels. People thought it was heat transfers. Direct-to-garment printing was not part of the public's vocabulary.

More people also know what digital printing is now because of the number of

Web-only companies offering it. We don't need to explain it to nearly as many people as in the past. Many consumers cannot tell the difference between screen printing and digital printing. The low minimum order requirements have really helped speed the acceptance of digital printing.



**One of the biggest challenges digital printers have is properly curing the shirt. Blue Heron uses a conveyor gas dryer for consistent high-quality results. Photo courtesy of Blue Heron Industries, Little Falls, N.J.**

We've had a lot of retail customers whom we have increased our sales with because we have been able to ramp up the offerings from an art perspective. Their retail sales of digitally printed merchandise have gone up, and their screen printing sales have gone down, because they can offer more intricate designs and more of them because of the lower minimums. Today, I'd estimate that somewhere around 75% of all new customers are digital T-shirt customers.

### When to Buy a Digital Printer

There are a lot of people out there who are spending the big money to buy industrial equipment like we have. They are savvy, but even some of them have made mistakes. You have to have a customer base when you buy a piece of capital equipment. You cannot say, "I'm going to invest my money and take on a \$1,000 to \$5,000 dollar-a-month lease payment and then go find customers to pay for that."

Developing a customer base is slow process, and it doesn't happen overnight. The

people who have a customer base that primarily use T-shirts are more apt to see success. There are some embroiderers, who I know personally, who have added digital printing and done quite well, but their learning curve has been longer.

They have done well in the sense that they were serving only one part of their customer's needs so now they are able to keep more of that in-house. I also know other people who purchased equipment and were never able to generate a customer base.

I think your best bet is to develop your market using a contract decorator and when you see that you have a significant order flow that can support a capital investment, you are free to purchase at that time. But, be aware that just because you buy the equipment doesn't mean that your life has changed. Now you have to learn how to use it.

I don't think there are a lot of options in the digital printing world. A lot of the equipment is pretty much the same with a different label on it. We look at it in two ways: there is industrial and there is tabletop equipment. You need to assess your own needs and potential growth.

Regardless of which you choose, there is a significant learning curve to adding digital printing. R & D has been our biggest expense in setting this up. It's trial and error. We have test-printed cases and cases of shirts to find what works.

Direct-to-garment printing is the fastest growing segment of the decorated apparel market, but it's not for everyone. It takes solid equipment research and an understanding that operating at the top level of the industry is going to require commitment, patience, and a significant investment.

**Kevin Kelly started screen printing in 1976 as a high school student and has been involved in decorated apparel for more than 34 years. He opened his current business, Blue Heron Industries, Inc. in Little Falls, N.J., in 2002. Blue Heron offers volume screen printing, embroidery and direct-to-garment services. In 2007, Kelly purchased two Kornit Thunder 932 direct-to-garment printers. Since that time, he has established a reputation as one of the best direct-to-garment printers of dark custom T-shirts in the country. You can reach Kevin at [kkelly@goblueheron.com](mailto:kkelly@goblueheron.com) or visit <http://www.goblueheron.com>.**

### Corel Tips

**Quick Zoom** - You can quickly switch between your current view mode and your previous view mode by pressing **Shift + F9**.