

# Digital printing takes a step forward

Duplicators or mid-range replicators looking to purchase printing equipment may be hearing a lot more about digital printing these days. While *MediaPack* has written about this option in the past, more companies have recently introduced new products. By Debbie Galante Block



Tapematic's new 2Print digital machine

While Autotec's equipment for thermal transfer has existed for a while and Kammann had a form of what they called digital printing with its HP Indigo machines, new machines poised to hit the market offer different technology, giving potential customers several options to consider before putting down the considerable amount of money it costs to make the jump into digital printing.

That said, Tapematic's new 2Print digital machine is actually the most inexpensive option. A small machine, with four to eight heads and no bells and whistles, goes for as little as US\$135,000. The company expects to be installing 15-20 machines in the US early this year, according to Ron Goodwin, Tapematic vice president marketing. Using inkjet technology, 2Print prints directly onto the disc surface. Short runs from five to 500 discs can be produced without an increase in the cost per disc factor, according to Goodwin.

The actual cost savings per disc can be as much as US\$0.20-\$0.40/disc compared to screen printing. "Much of that savings comes as a result of set up time. Screen printing takes a long time to set up," he said. There's virtually no set up time associated with digital printing.

Tapematic offers a standard version as well as a high-speed version. The standard version has fewer heads than the high-speed version. It functions very similarly to a desktop printer. "We go backwards and forwards over the same area with a slightly different area of the head so we get a good covering. One of the negative things about our competitors' machines is that if there is a problem with a head or it just needs cleaning, you will see it immediately because there is no correction," Goodwin explains.

Spinergy, East Rochester, NY, expects to get its first Tapematic digital printer by the end of February, according to Stephen S. Nazarian, the disc manufacturer's director of sales and marketing.

Up to now, Spinergy's discs, both replicated and duplicated, have been mostly screen printed. "We regularly have calls for 50 to 500 piece runs that need to be high quality, need to be full color. We basically had a need for Tapematic's machines before they existed," Nazarian explained. "We discovered if we moved 65% of all the work that fell beneath those thresholds over to the Tapematic machine, we only remove 10% of the disc volume from the screen printers. However, we eliminate 70% of the set ups. What will be an even greater upside for us is the recouped opportunity time on the screen presses. We now have the ability to run between 3 and 4 million more pieces through our screen equipment. Even if it's 2-3 million pieces, that's substantial. When we looked at the figures, we thought 'can it really be this obvious?'"

The biggest challenge with digital printing, according to Nazarian, has been showing customers ready made samples. While digital printing is just as durable as screen printing, customers seem to be asking, "is it better?" "My answer is... it is different. It does have a little of a textured appearance to it, but in some cases... that makes it look better," Nazarian said.

The other machine truly on the market, installed at plants in the UK, is from Copytrax Technologies, headquartered near Cambridge in the UK. PROJECT 37 was developed for the high-end duplication and mid-range replication markets. The big systems are "designed to be maintained by a fully qualified engineer. It's a different level of technical expertise," says Steve Woods, Copytrax managing director. Copytrax, with its partner, Sun Chemical, has developed a machine with "single pass" grey-scale printing that needs no post-print finishing. It prints with full surface coverage in process color, he said. "Grey scale heads offer eight levels of different dot sizes. The head technology and the ink technology have finally come together," says Bob Nersesian, marketing manager, Coates Screen Inks, a division of Sun Chemical, which developed the ink.

Copytrax has developed flow-out printing. "Other digital printers cure between each color, so users are printing CMYK and curing between each or they have a lamp at each end and are curing after each part," explained Woods. "We are allowing the ink to flow together to have a nice smooth surface, then we hit it with a special lamp and this makes it cure. The new ink is cured by UV

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Autotec's digital printer, model #101-1

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light and adheres better and has better weatherability. It is very pure, clean and glossy, so we don't have to put on a gloss afterwards." And, it's fast. From receipt of artwork to 500 finished discs takes 30 minutes, the company claims. The machine also has a very small footprint, and while cost varies, a basic set up starts at \$550,000.

Kammann is about to jump into the market again with its 1204D. The basic model starts at \$600,000.

Integrated into Kammann's system is the ability to decorate the screen printing. "We put down the white and the four colors, then we have the option to come back with a spot color or come back with a lacquer in the sixth station. We have a full grey scale level which allows us to control the dot structure as well. LED UV curing also eliminates traditional use of UV. There is no heat or ozone, and a 30-40% reduction in energy costs occurs as a result of using LED," explained Steve Gilbertson, president.

In terms of thermal transfer, Autotec's Dave Maxham says they are always trying to make the technology more affordable for those who would



never even consider a full blown system. As a result, a new generation of more inexpensive transfer units are being introduced. "It is aimed at those really small producers. Its footprint is about 2 x 3 ft. Anybody can fit it in their facility. And, it still gives you around 20,000 pieces in a 24 hour day."

Autotec still offers the send away option for users as well. Artwork can be posted to an FTP site, Autotec has a printer that does the printing on the film and a finished roll of film is sent back to the customer and he then can transfer the film to a disc. "We're getting so busy, that we are in

discussions for a second print center. Right now, everything is handled out of Boston. However, there have been occasions that we have been so busy, that we have actually done it in Switzerland where we have the same model," Maxham said. "For a while, all of our clients were duplicators, now we're getting into people that are replicating and into some of the big captive houses.

Swiss-company Plamaprint AG, whose parent company is Sefar, offers a similar transfer system. The digital image is sent directly to the Digitron via computer or data media. Subsequently, the image is transferred to the Digitron's Image Generator. The color image is printed on a silicon-coated release paper on the printing system. The maximum resolution is 600 x 1800 dpi. The paper film is then positioned in the machine and decoration is then applied automatically using pressure and heat.

The company is already testing its second-generation machine at Sonopress. The new system offers features like labeling and an identity code reader as well as a second light station. That is expected to hit the market in April.

While the offerings of digital technology vary, all suppliers say they realise they are offering a new option to a mature market, however, digital is a more efficient replacement for some screen printers, they say. Also, there are a lot of new duplicators coming into the business, and replicators who realise there is business to be had in that sector. ●