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Presstek DI Presses

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UV Inks Bring Drive-Through Printing, Higher Margins

Mark Sullivan, Presstek Product Manager, Digital Presses
Presstek, Inc.
603-595-7000
msullivan@presstek.com
www.presstek.com

The quest to add differentiated value-added services that command higher margins and bring in new business has print service providers looking at UV printing capabilities. This growing interest is being met by offset press manufacturers who are now offering UV printing solutions, including Presstek with its UV printing option for 52DI® and 34DI digital offset presses.

One of the attention-grabbing benefits is the fact that UV inks dry instantly, even on non-porous substrates such as plastics, which could take as much as a week to dry with conventional inks. This capability can increase throughput, as well as expand the range of new services that can be offered to clients. Before I go much further, let's first look at how UV printing works.

How It Works

The UV process uses special inks that have photo initiators in them. When exposed to UV light, a chain reaction occurs that forms a solid, dry, continuous ink film with vivid colors and deep, rich blacks.

The UV inks sit up on top of the substrate since they dry instantly, which minimizes dot gain, improves image sharpness, and results in higher ink densities. The inks are also very durable. The printed surface is smoother, glossier, and more rub and scratch resistant than those printed with conventional inks. Most UV inks are also relatively light-fast, making them good for outdoor applications.

In addition, the UV inks do not change color or consistency due to evaporation or pH, and that means less press downtime and a more consistent image, even for longer runs. Ink will not dry in the ink train, which provides additional benefits. There are fewer press wash-ups, saving time, increasing up-time, and reducing water and solvent usage.

UV inks do not require the use of spray powder, keeping the facility cleaner and eliminating the need for yet another consumable.

Raising the Bar

There are more business and production benefits that are attracting print service providers to UV printing. By implementing UV printing technologies, printers are able to expand the range of applications they can produce. Many of these new applications carry higher margins. For example, the ability to print on unique substrates, such as plastics and films, can differentiate your firm and open up new opportunities for your customers.

While conventional offset presses can certainly print on plastics, they can take a long time to dry. Not only does this increase lead times, but it also takes up space, neither of which is an attractive proposition in a highly competitive and time-sensitive world.

Increased Throughput

By introducing UV printing capabilities, you can print on substrates such as plastics with great ink adhesion and instant drying. Even for general commercial print jobs, faster drying times translate to increased throughput on the press. Where you might have waited fifteen minutes or so on a waterless press—and much longer with conventional offset—for sheets to be dry enough to back up, with UV printing you can back up instantly and move right to bindery, eliminating time and bottlenecks from the production process.

Better Print Quality and Expanded Capabilities

While UV printing is excellent for plastics, foils, synthetics, and static-cling, it also delivers great quality with inexpensive papers. Since the inks do not wick into the paper, lower quality or uncoated stocks can be used, and the result is a nice, high-gloss image that can satisfy a wide range of quality demands. High-quality printing on uncoated stock for greeting cards and business cards are just some of the applications that can be considered.

Some of the more unique applications that can be produced with UV printing include tags and labels, such as hotel hang tags on plastic, garden stakes, outdoor signage for events such as golf tournaments, and yard signs for elections—and it is not too early to start planning for the next election cycle! UV printing is also ideal for lenticular applications. Lenticular printing is a technology in which a lenticular lens is used to produce images with an illusion of depth, or the ability to change or move as the image is viewed from different angles. Remember the prizes in the Cracker Jack boxes that had animation effects such as winking eyes or flipping pages when you changed the viewing angle? This technology has evolved significantly and there are many applications in publishing, packaging and direct marketing where they can bring significant value.

The rub resistance of UV printing also benefits applications such as magazine and book covers, direct mail, and other documents that need to grab the recipient's attention but are often subjected to rough handling while in transit.

DI Presses with the UV Option

UV printing has long been associated with long run length printing on 40-inch presses. However, with Presstek's recent announcement of the UV printing option for the Presstek 52DI and 34DI digital offset presses, the benefits of UV printing are now available for the fast-growing short-run printing market.

According to Arthur Lefebvre, the executive director of the Waterless Printing Association, "UV printing capability on the highly automated DI waterless press is a potent combination that elevates both quality and ease of operation to new levels." Presstek's combination of waterless printing with UV inks extends the flexibility of an already produc-



tive and capable press. The ability of the DI press to deliver sellable color within twenty sheets with up to 300 lpi and FM screening quality on a broad range of substrates can now be applied to the production of printed materials on even more substrates. Printing on specialty substrates often commands higher margin work. The DI's fast run up to color, combined with the UV waterless ink's ability to maintain consistency during the press run, results in even less waste. Waste minimization becomes a very important benefit, especially when printing on an expensive specialty stock for specific UV applications.

Environmental Benefits

The UV printing process is less harmful to the environment when compared to many conventional inks, because there are no solvents or VOCs. In addition, when using waterless inks for UV printing, dampening chemicals are eliminated. With the UV option for the DI press, these environmental benefits are further enhanced by the DI's chemistry-free on press imaging of plates, removing the need for a separate platemaking process and associated chemistry and water consumption. This not only reduces the materials that need to be purchased and disposed of, but the pressroom also benefits from reduced emissions.

All of these benefits—faster throughput, increased print quality, reduced environmental impact, and reduced labor and waste—are making it easier for printers to differentiate themselves in a very competitive marketplace.

Now Is the Time

In tough economic times, such as we currently find ourselves experiencing, the natural tendency is to tough it out and wait for better times. However, savvy business people are using this as an opportunity to plan and invest for the future, positioning themselves to come out of this period stronger, and more capable, competitive, and profitable than ever before. Investing in UV printing solutions is an excellent way for a printing firm to take a step in that direction.

Mark Sullivan joined Presstek in 2006 and has over eighteen years of graphic arts industry experience holding management positions in business development and marketing at several companies, including Creo, Shira, and Scitex.