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The Prospect of DECORATIVE GLASS

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SPOTLIGHT

A BROAD SCOPE

Decorative Glass

By Stephanie Lane

From the ancient Egyptians to 17th century Britain, the value, functionality, and beauty of glass is recognized in artwork to commercial business. Glass manufacturers build on this history with the help of a number of decoration methods. Traditional processes include screen printing and sand blasting. The inclusion of digital printing as a method of decorating glass expands possibilities further. One glass fabricator with a long and rich history is Hartung Glass Industries.

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A LONG AND RICH HISTORY

Founded in 1924 in Seattle, WA, Hartung is a mainstay of the North American glass fabrication industry. Over the past 95 years, Hartung has not been afraid to embrace change. Once a small glazing company, it now offers over a dozen different services including decorative glass products completed via silkscreen, digital printing, and full custom lamination.

Hartung boasts over 800 employees across ten different locations. It primarily serves the Central Southern, Midwestern, and Western U.S. and Canada but is working towards a stronger national and international presence. In addition, it is the parent company to Agalite and Holcam, bath enclosure manufacturers and Lami Glass Products, a glass laminator.

The company understands that just because it's established doesn't guarantee continued success. It always makes a point to incorporate new technologies and expand offerings whenever possible. Digitally printing on glass is one example. This product portfolio is referred to as High-Definition Glass Digital In-Glass Printing (HDG). The digital print operation is housed in the Wilsonville, OR branch.

> **Digitally printing on glass removes the artistic limitation of silkscreen and lamination printing.**
>
> — Craig Shelton, regional sales manager, Hartung

OLD AND NEW

Prior to digital printing, methods to decorate glass. With both services now offered, each has its place for different projects. "Silkscreen is beneficial for high-volume, single-color needs. If the project has a high volume of duplicates in a single color, silkscreen is the way to go. If the project has a high volume of glass but every piece needs different art, a low piece count, or multiple color needs, digital is used," outlines Derek Sears, graphic designer, Hartung.

The incorporation of both technologies into the business model is strategic, since neither can replace the other depending on the project. "Decorative glass is one of Hartung's strategic initiatives," explains Craig Shelton, regional sales manager, Hartung. "Although we offer one of the widest selections of decorative glass products on the West Coast, we see this as growth area."

In 2014 it acted on this initiative by investing in an AR4000 digital

1. A recent project commissioned by the Alameda County Arts Commission involved a six-part permanent installment for the County of Alameda Building in Oakland, CA. Photo

Hartung utilized silkscreen

Credit: Sibila Savage Photography.

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2. The artwork, entitled *Alameda County Water*, was printed on large glass panels using a Dip-Tech AR4000. Photo Credit: Sibila Savage Photography. 3. Digital images of Norling's watercolor murals were printed onto low-iron Starfire glass panels using a Dip-Tech digital ceramic glass printer. Photo Credit: Sibila Savage Photography.

digital artwork into print-ready files. The printer also provides the ability to print permanent full-color images with large format capabilities.

As with any new technology, there was a learning curve when it came to implementation, specifically in regards to file preparation and printer operation. Since the glass is transparent, there is always a need to tweak the image opacity to create the ideal balance. A more translucent image allows for more light transmittance. The opaquer the image the more saturated the colors show. In some instances, dual layers of images are printable—having one on either side of a single piece of glass.

"The hardest part is getting files with high enough resolution from our buyers. Unlike printing on paper, where the ink bleeds together to create an image, on glass the ink sits on top and doesn't seep in or bleed. Because of this, we need at least 600 dpi images to get the full capacity of the printer," admits Sears.

Hartung prints directly on flat, non-coated glass because of the tempering ovens used after printing is complete. This process—which enhances the glass' toughness or durability—requires non-coated glass to avoid image scuffing on the oven rollers.

MARKETING NEW TECHNOLOGY

Educating buyers on new technology is a difficult process but Hartung is positioned to meet the challenge. With digital printing's vast capabilities, it isn't too difficult to sell even the most skeptical on its merits.

"Digitally printing on glass removes the artistic limitation of silkscreen and lamination printing. This allows for more creative freedom both visually and architecturally—it is so versatile it can be used for nearly any product," shares Shel-

ceramic glass printer from Dip-Tech, a Ferro Company.

The printer runs with Dip-Tech natural-based ceramic inks for glass. Kept in a climate-controlled room equipped with high-efficiency air filters, the best quality images are ensured.

The printer is ideal for a number of reasons, according to the company. It offers a simple process of converting used for nearly any product, "shares Sherton. And he means nearly every product. From storefronts, residential properties, and garage doors to shower doors, railings, whiteboards, and tabletops—there are very few limits.

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As digital printing on glass becomes more common and customers are savvier to its capabilities, Hartung thinks outside of the box when it comes to promoting its services.

"Other markets for digitally printed glass outside the typical decorative or commercial business include marine and transportation, which helps expand our base business," explains Rich Porayko, marketing consultant, Hartung.

A PROJECT TO BE PROUD OF

Some of the more common digitally printed projects completed by Hartung are shower enclosures and room partitions. This is because of its relationship with Agalite and Holcam. For example, GridTech is a digitally printed design developed by Hartung that gives a piece of

Shower enclosures and room partitions don't capture the scope of its projects though. Hartung works with many different clients and each provide individualized goals and visions for a finalized piece. Part of what's so exciting about digitally printed glass is the ability to be more artistic and creative with the design.

A recent project commissioned by the Alameda County Arts Commission involved an artist, Jane Norling, looking to create a six-part permanent installment for the County of Alameda Building in Oakland, CA. The artwork, entitled *Alameda County Water*, was printed on large glass panels fixed to the walls. These panels create an eye-catching and mesmerizing final product of vibrant blues, greens, and oranges.

Knowing printing to glass was pos-

Norling's art onto glass began. From start to finish, the process took a few months.

Norling drew half-scale watercolor murals. A photographer then took high-quality, detailed photos of Norling's artwork. These became the digital images Hartung printed onto low-iron Starfire glass panels. This glass is a go-to for digital printing. Unlike most other types of glass, this one doesn't have a green hue to it. The edges appear to be light blue, but the glass appears clear from head on. This was an ideal choice to capture the lively colors the artist used.

One of the six installations uses 19 glass panels. The image is suspended between a staircase, requiring five panels to be cut at an angle. Printed opaquely, the graphics appear to be painted directly on glass.

This is not the only artistic endeavor that Hartung has taken on. Hotel Eastlund in Portland, OR installed a large glass piece that featured an image of Bridget Bardot. The company also created a glass canopy for a Hyatt Regency in the San Francisco Bay Area.

WHAT'S NEXT?

Glass manufacturing and digital printing are always evolving. Keeping a keen eye

veloped by Hartung that gives a piece of glass a mullion-like appearance.

4. Hotel Eastlund in Portland, OR installed a large glass piece featuring an image of Bridget Bardot.

Knowing printing to glass was possible, but not sure how, the arts commission and Norling contacted Dip-Tech. They were then referred to Hartung and the process of digitally printing

are always evolving. Keeping a keen eye on trends and advancements is an important skill. Knowing which ones to integrate into a business and which ones are passing fads is invaluable. Hartung celebrates a long, successful history. It adapts and expands when necessary, which is most recently illustrated by incorporateing digital printing into its decorative glass services. ***IPM***

COMPANIES MENTIONED

IPMdirect See page 24 for more information.

INFO#	Company	Website
167	Dip-Tech, a Ferro Company	dip-tech.com