By David Gross

Widen the Road

Latest in sublimation sizes

The VJ628 is the third and largest member in the Virtuoso series of printers.

ALL IMAGES COURTESY DAVID GROSS

"There ain't no rules around here! We're trying to accomplish something!

—Thomas Edison

I have been traveling this road for over 20 years and am constantly amazed at the viral success that sublimation has experienced. During my presentations at trade shows, I talk about sublimation being like electricity in that new uses and opportunities are always appearing. As an electrical engineer, I wonder what folks like Edison and Tesla would think of our world today?

Why is dye-sublimation transfer special? The dye-sublimation process is a flexible technology that allows engravers, screen printers, sign makers, embroiderers, pad printers, photographers and artists to add thousands of high-value, personalized, full-color photo-quality products to their existing product offerings.

To do sublimation, we need three pieces of equipment: computer, printer and heat press. Using an inkjet printer loaded with dye-sub ink, a transfer is produced by printing a computer graphic onto sublimation paper. This printed transfer is then secured to the substrate, placed into a heat press, and pressed at the proper time and temperature.

Substrates must have three characteristics: (1) must be made of, or coated with, an oil-loving molecule like polyester (as opposed to a water-loving molecule like cotton); (2) must be white or light colored; and (3) must be able to handle the 400° F heat. During this heating process, the dyes on the paper turn into a gas and enter into the pores of the coating or fabric. Once time is up, we separate the paper from the substrate and allow it to cool, trapping the sublimation dyes within the coating or fabric. The result is high-value personalized/customized products that can be produced in minutes at a low cost.

SAWGRASS VIRTUOSO VJ628: LARGE PRINTING

Early this year, Sawgrass' Virtuoso SG400 and SG800 printers were introduced as the first out-of-the-box desktop sublimation printers. Additionally, Epson introduced the SureColor F-series printers for fabric decoration. The unmet need, however, continued to be an out-of-the-box sublimation printer that's in-between the desktop and large format printers. Meeting this need is why I'm so excited about the introduction of the VJ628.

The latest addition to the Sawgrass Virtuoso family, the VJ628 is the third and largest member in the Virtuoso series of printers. Breaking free from the desktop, the VJ628 is a floor standing printer that delivers up to 24.4-inch wide roll printing at impressive speeds and low operating costs. Sawgrass refers to the VJ628 as a 25-inch printer because a 24.8-inch wide roll of paper is used to achieve the desired 24.4-inch print width. I sometimes call the VJ628 a 24-inch full bleed printer because it is capable of printing full bleed transfers for products up to 24 inches in width. Although the printer isn't entering new territory of dye-sub printing, the VJ628 takes sublimation to a new level of performance and stability and is the first full-featured, out-of-the-box 25-inch printer that is manufactured and warranted for sublimation printing.

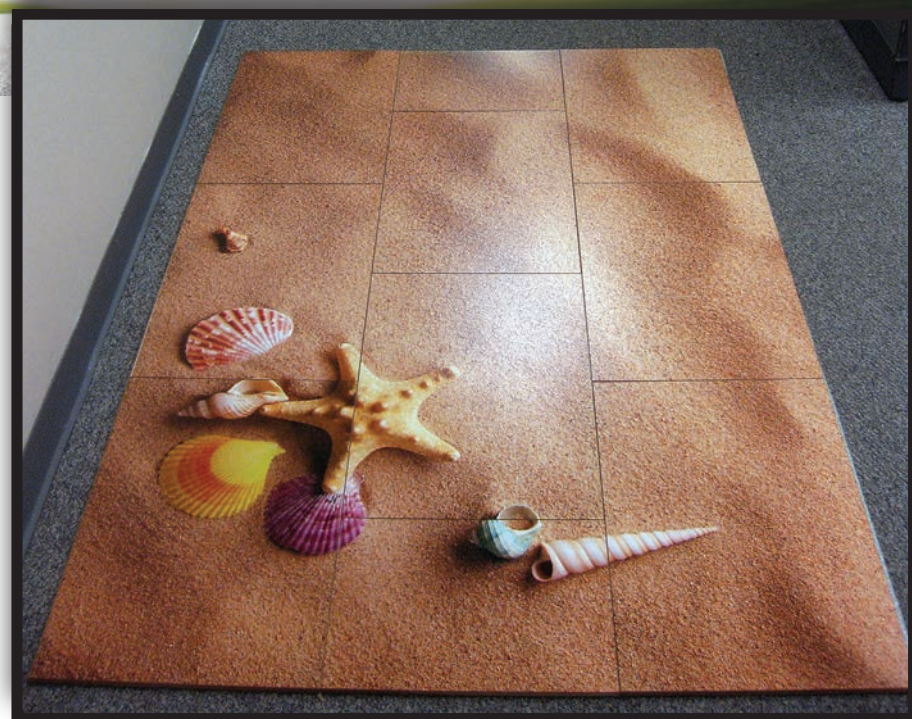
Large ChromaLuxe Metal can be done with larger printers.

The 41-inch diagonal press dimension of the DK32 is helpful for substrates like neckties.

Mutoh manufactures the VJ628 to Sawgrass' specifications and for use with Sawgrass' new SubliJet HD inks. At the heart of this printer is an advanced Epson DX7 print head that delivers stunning quality with impressive speeds. Incorporated into this printer is a patented interweaving technology that lays down ink in waves to reduce visible banding.

A few key highlights of the printer are:

- Small compact footprint only requires 7.5 sq. ft.
- Print width up to 24.4 inches (with 24.8-inch roll paper).
- Complete with printer stand and built-in take up reel for long runs of printing.
- SubliJet HD inks in either dual CMYK or eight color configurations.
- On-site service and warranty for sublimation with extended warranties available.



Unisub Flooring

Perhaps one of the most exciting areas in sublimation advancements is the floor under your feet. Unisub's new 16-by-16-inch and 16-by-24-inch tongue and groove wood flooring is made of moisture-resistant HDF (High Density Fiberboard), features a breakthrough hard sublimation coating, and is suitable for a variety of medium traffic installations. Although finding good prospects and high quality artwork will be some of the challenges encountered, the VJ628 and DK32 are a good combination to walk into this new market.

SUBLIMATION PAPER

The VJ628 is a roll paper printer with an excellent built-in paper take-up system (generally an option with other printers). Cut sheet paper fans shouldn't worry though—the printer's built-in horizontal paper cutter allows you to have ultimate control of the transfer length whether you are printing individual transfers or using an optional software RIP to gang up multiple transfers or print jobs.

Although I've only mentioned the 24.8-inch roll paper so far, common desktop widths can also be used, including 17-, 11-, and 8.5-inch rolls. Keep in mind that maximum print speeds are achieved by using the widest paper. Wider paper allows the print head to drive at interstate speeds while narrower paper causes the print head to do a lot of stop and start city driving.

Officially, we call sublimation paper "release paper." The paper "lets go" of the printed ink as it turns into a gas. In order to have a great transfer, the ideal release paper must have three characteristics: (1) keep the printed dots sharp; (2) handle 400° F heat well; and (3) release almost all of the printed ink. I recommend two papers that provide exceptional results. For soft substrates, glass and SubliSlate, I recommend TexPrint XP because it does the best job of releasing the ink. For hard substrates such as ChromaLuxe aluminum, I suggest DyeTrans SPP paper because it provides the ultimate in detail and stability while also providing excellent release characteristics.

INK: SUBLIMATION FUEL

The fuel for the VJ628 is a new 220ml closed cartridge version of Sawgrass' SubliJet HD inks originally developed for the Virtuoso SG400 and SG800 desktop printers. With eight cartridge slots, the VJ628 provides flexibility depending on your primary choice of substrates. For general hard or soft substrates, I suggest going with the dual CMYK configuration that provides incredible speed and great image quality.

For hard substrate lovers (especially ChromaLuxe fans), I recommend the eight-color configuration that provides CMYK plus light colors for stunning light and mid tones. If you are unsure which configuration is right for you, contact your sublimation partner for advice. Sawgrass has indicated that down the road they would produce some other ink configurations that would include fluorescent or extended color gamut sets.

DRIVING THE VJ628: RIP VS. DRIVER

Using the Windows platform, the VJ628 can be driven by the included Sawgrass PowerDriver or by an optional Software RIP (my favorite is Wasatch's SoftRIP). I'm currently working on the Mac platform solutions. As printers get bigger, the amount of data sent to the printer increases.

For smaller printers, we use the included printer driver and print directly from a graphics application such as CorelDraw. For larger printers, a software RIP is recommended. Once a design/graphic has been completed, it's saved in a format such as PDF and then imported into the RIP program. Once there, the RIP is flexible in the way it controls the layout of the print job so that you can make the most of your paper.

In addition to print layout, RIPs also provide superior performance and color management for the printer. One downside of RIPs is the cost, although it may be worth it from a performance and work flow point of view.

DO I NEED A BIGGER PRINTER?

I think there are three reasons *to consider* the VJ628, whether it's your first sublimation printer or you want to compliment your existing desktop printer(s): (1) wider and longer paper allows you to tap into exciting substrate opportunities; (2) fast printing increases production to the point of considering multiple heat presses; and (3) lower operating costs compared to desktop printers.

THE DK32: A PERFECT COMPLEMENT

A larger printer is fantastic, but how can you produce larger substrates without a larger heat press? I asked Aaron Knight at the Geo Knight Company to design a

next generation heat press for this new printer. The result? The DK32: a 26-by-34-inch heat press that I think is a perfect complement to the new printer. Although a manual press, it can produce 8,000 pounds of pressure (essential for ChromaLuxe metal, natural wood and MDF).

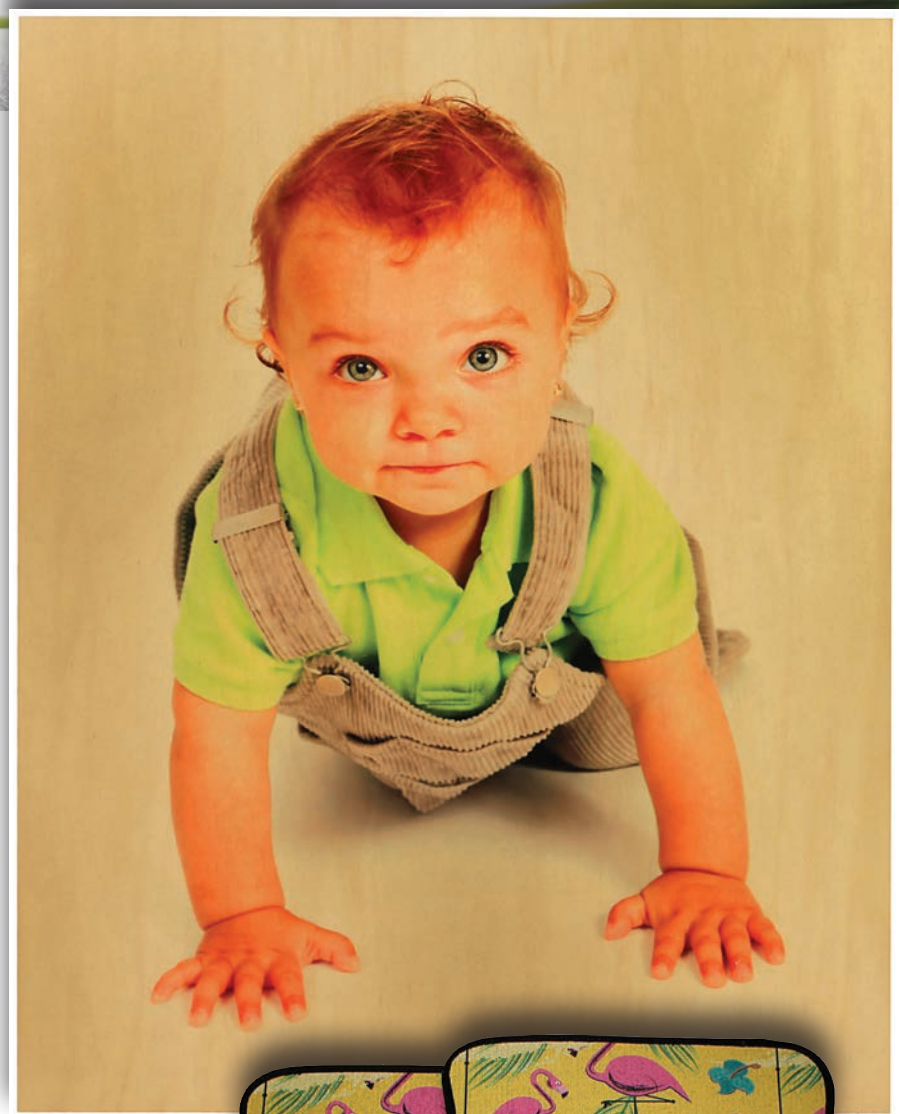
Unlike other presses, it accommodates substrates up to 2 inches thick. The 41-inch diagonal press dimension is helpful for substrates like neckties, lanyards and ribbons.

IT'S ALL ABOUT THE SUBSTRATE

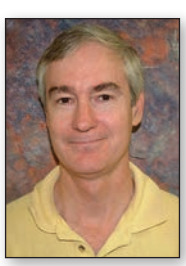
What new product can you produce with the VJ628 and DK32? Unless otherwise indicated, my criterion for listing a product is that it can be printed and transferred with complete coverage.

- Floor mats
- Car mats
- Large ChromaLuxe metal (produces the 24-by-30-inch size)
- Large ChromaLuxe natural wood and MDF
- Gallery wraps
- LED soft signage
- New UNISUB commercial flooring
- Bandanas
- Towels
- Ceiling tiles
- Pillowcases
- Increased T-shirt imaging area (not large enough for all-over print but a significant improvement)
- Undershirts for infants
- Unisub table tops
- Flags
- Long ribbons, neckties and lanyards (up to 41-inch diagonal)
- Tote bags

As our road grows and widens, the future looks bright. With better equipment and more substrates, I look forward to being able to accelerate down our Road to Sublimation Success.



Some of the substrates that can be produced using the VJ628 and DK32 equipment include car mats and large ChromaLuxe natural wood and MDF.



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