Kleinhempel Opt for Speed to Gain an Edge in a Tough Market

CHALLENGE:
“We are consistently under pressure to deliver more posters in better quality increasingly faster.”

Six of Kleinhempel’s nine large-format printers are VUTEks. So when it was time to find a way to increase productivity without sacrificing quality, Christopher Kleinhempel, naturally looked to EFI for an answer. That is not to say he didn’t scour Fespa 2010 to make sure he had the best solution. But after getting a closer look at the VUTEk GS5000r, EFI’s new greyscale-head technology printer, the GS5000r went from EFI’s stand at Fespa in Munich directly to Kleinhempel in Hamburg, Germany.

Kleinhempel’s Obsession
Ralph Kleinhempel founded a photo studio in 1936 in the Hamburger Kunsthalle, a museum for fine-art paintings. He made colour separations from the paintings and 35 mm colour transparencies for museum visitors. His son Christopher R. Kleinhempel
apprenticed as a photographer at the Reger photo studio in Munich, became master photographer in 1982 and took over his father’s studio two years later. He then expanded by adding a large photo studio for advertising and a photographic lab for consumer photography. Up to nine photographers were working in the best times, when large-format pictures on photographic paper were a profitable source of income.

Kleinhempel’s background in photography explains his high-quality requirements.

Today, Kleinhempel has nine large-format printers in production, up to five metres in width. About 40 employees, in two shifts, produce a variety of products that are used in indoor and outdoor advertising; printed on paper, canvas, textiles, mesh or backlit materials.

Inkjet Evolution

In 1992 the company installed the first VUTEk 1600 in Europe. This superwide digital airbrush printer used eight airbrush heads to print posters and displays with solvent inks. The images were ideal for the American billboard size of 5 x 13 metres. Kleinhempel printed colourful transparencies for light boxes in sizes up to 5 x 10 metres. The most important customer was “Billboard”, a media company in Hamburg that marketed advertising space for consumer products and was thrilled with Kleinhempel’s quality output.

VUTEk replaced the airbrush heads with inkjet heads offering much finer resolutions. It produced crisp, sharp headlines and text and smaller pictures reproduced in photographic resolution. In 1998 Kleinhempel installed a VUTEk 5300, a five-metre superwide printer, which was then the best image quality on the market; it became the base of VUTEk’s world-wide success. After 12 years of production the 5300 made way for the new Vutek GS5000r.

In 2004 Chris Kleinhempel further improved operations. He centralised all departments—the digital photo studio, customer service, prepress, inkjet printing, post processing, shipping and service – in one large industrial building.

“We are consistently under pressure to deliver more posters in better quality increasingly faster” justifies Kleinhempel about his decision to purchase the GS5000r. “Because the GS models print images much faster and better,” he adds.

GS stands for “Greyscale” and the “r” indicates that the GS5000r uses roll material only, unlike the two smaller models (GS2000, GS3200) that print roll-to-roll and convert to flat-bed printing.

Kleinhempel and his production manager Christian Marx realised the following advantages in the VUTEk GS5000r:

Greyscale inkjet heads
The VUTEk GS series uses a multi-shot-technology which produces the same size droplets but shoots them with a higher speed and frequency onto the substrates. For every printing pixel, one to seven droplets are shot in fast succession. This way they can simulate eight different grey levels. The GS5000r offers two different resolutions, 600 dpi with 24 picolitre droplets or 1000 dpi with 12 picolitre droplets.

Higher reliability
The higher reliability results from a much stronger frame design and the improvement of some components. One is the new UV lamp generation which hardens the UV ink much faster, allowing a faster printing speed. The new printing units contain only two inkjet heads instead of three in the previous models, but offer the same life span. In addition the new inkjet nozzles clog much less.

SOLUTION:
“The VUTEk GS 5000r prints images much faster and better.”
Better image quality
The smaller droplets at 600 or 1000 dpi (240 or 400 pixels per centimetre) create a nearly photographic image resolution with flat tints and crisp, sharp text, readable up to four points. The image quality is also improved by the colour selection, which can print with two times full CMYK, or with CMYK plus CMYK light.

Faster printing speed
The high frequency of the greyscale heads and the stronger hardening of the UV ink allow faster printing speeds. The GS5000r prints with eight colours CMYK and CMYK-light up to 149 square metres per hour, in the switchable two times CMYK-Modes up to 288 square metres. In reality, the production depends on the quality and size of the images, customers’ expectations and Kleinhempel’s own quality standards. Christian Marx expects an average production speed of 60 square metres per hour at a much better image quality.

Improved UV inks
The UV inks have been improved. They emit much less odour, contain virtually no volatile organic compounds (VOC) and do not contain heavy metals such as antimony, arsenic, cadmium, chromium, lead, mercury and selenium. They reduce printer downtime by virtually eliminating print head clogging.

Improving Customer Loyalty
Kleinhempel says that his reasons for ordering the new printer was not growth, but the desire for faster and better production and a shorter production cycle. Kleinhempel feels that improving customer loyalty is more important than focussing on getting new customers. “I do not see hardly any growth at this time in our market,” he explains, “otherwise the prices would remain stable.” By lowering production costs with a faster and better printer like the GS5000r, Kleinhempel gains an edge in a tough market.

RESULTS:
“Lowering production costs with a faster and better printer gives Kleinhempel an edge in a tough market.”
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