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## **Hinterkopf sets a new benchmark for digital printing**

### **Faster, energy efficient and higher resolution– Hinterkopf's digital printing machine generation 4.0**

**After several years of intense research and development, machine manufacturer Hinterkopf presents their fourth generation of digital printing machines. Higher print resolution combined with significantly higher production speed expand the capabilities of this efficient technology. Additional benefit: The Heat-Free Decorating System for optimum energy efficiency.**

It was in 2014 when machine manufacturer Hinterkopf set the new industry standard for digital printing on tubes, cans, sleeves and cartridges made from aluminum or plastic. Decoration of packaging with photorealistic images, impressive color and razor sharp type and graphics provided completely new possibilities to packaging designers. All this was paired with amazing resource efficiency compared to conventional technology.

Based in Eislingen in the south of Germany, the family-owned pioneers are pushing the envelope once again. Machine generation 4.0 is based on improved print heads, which are the result of several yearlong research and development by Hinterkopf. They allow a substantially higher density of ink droplets in the printing process. Previously, a print resolution of 900dpi was industry standard; with its new generation 4.0 print heads the benchmark is 1800dpi. This results in better print results, such as improved sharpness of edges which is required for both very small as well as very large type, or also QR- and barcodes. Aside from these functional aspects of packaging, the decorative aspects are also improved. Alexander Hinterkopf, Managing Director of Hinterkopf GmbH explains: „The new machine generation allows significantly improved solid colors as well as color fadings and transitions. The high print resolution allows an optimum ink coverage across the full spectrum from zero to 100% coverage. Previously the area between zero and 15% was a lot more difficult to reproduce.“ The new machine enables customer to create very delicate color transitions in 2 and 3 dimensions, which are often required in high-end cosmetics packaging.

Another benefit of the very high print resolution of the new machine generation come into play with small packaging products. Packaging for samples can be produced practically identical to the original commercial

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consumer packaging. This improves brand recognition, and helps consumers to find their desired product on the shelf

Increased print resolution helps reduce the overall production cost. New inks for the generation 4.0 print heads come with more pigment for increased color strength. They also have improved adhesion, which allows for reduced ink film thickness and reduced ink consumption, sometimes by up to 50%.

Production speed is increased with generation 4.0, which results in increased output and improved economics, all while setting a new benchmark of up to 200 packaging pieces per minute. This makes the new machine generation even more competitive for larger lot sizes. Change-over times remain negligible, when compared to conventional printing technology such as offset, screen printing or flexo. With digital printing, it is economical to produce minimum orders, produce repeat orders and offer print-on-demand.

In today's economy, energy consumption is on everybody's mind. The new digital printing machine generation 4.0 comes with significantly reduced energy consumption, which helps to reduce production cost. The brand-new Heat-Free Decorating System developed by Hinterkopf eliminates warm-up times of the curing systems when starting up and accelerating the machine. In addition, the ink jetting system does not require additional heat. These new developments result in lower energy consumption and a smaller carbon footprint.

„Digital print technology generation 4.0 is superior to all previous systems“ summarizes Alexander Hinterkopf. „It enables photorealistic images, impressive colors and razor sharp text and graphics. Production of decorated packaging containers is more efficient with less waste of resources. This opens up completely new possibilities for graphic design and marketing of products“.

The first machines with the new generation print technology are already available: D240.4 and D360.4 were presented to the public in the fall season at K Show in Düsseldorf/Germany, the leading trade show for the plastic and rubber industry.