Tactile effects at their very best

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Tactile features are playing an increasingly important role, not just in high-quality packaging (cardboard, aluminum, PET) but also for glass, paper, foil, plastic, decorative elements for furniture, floors and automotive interiors and in safety and security applications. When people feel textured surfaces in their hands, they know they are looking at an exclusive brand and will remember it for a long time. These textured surfaces are created using embossing forms and anilox rollers, which transfer coatings or other media onto a wide variety of materials.

From left to right: Dietmar Buchholz and Clemens Röder, Gravion's two founders and managing directors

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Based in Rheinfelden, Germany, Gravion is a very popular partner for the manufacture of customized embossing forms to be used in a whole range of premium applications. This is all the more remarkable because the company was only founded by Clemens Röder and Dietmar Buchholz in the summer of last year. However, the two partners and managing directors, as well as most of the 10-strong team, have many years of experience in the relevant industrial sectors and in embossing, coating and anilox roller technology.

"We help our customers turn their ideas into a reality and provide the expertise they need – from creating the 3D models all the way to the finished lasered roller," says Buchholz. The startup develops unique, high-resolution embossed structures. It is able to engrave directly, even in difficult materials.

"Gravion is an innovative form and embossing roller manufacturer that offers rapid response times and is enjoying dynamic growth. Our company's other outstanding strengths include meeting deadlines and being fast and flexible when satisfying our customers' demands. Our focus throughout is on our service philosophy, on fulfilling customer needs and requirements and on standardization," explains Röder. This in turn ensures quality and consistency in roller production.

Investing in a Cellaxy

To ensure it could meet the mostly very high requirements for 3D structures on embossing forms, Gravion bought a Cellaxy C500 laser system (manufactured by HELL Gravure Systems) from Dr. Wirth Grafische Technik GmbH & Co. KG. "When users are looking for a high level of material removal, ultra-fine resolution and genuine 3D, the Cellaxy's 600 W fiber lasers provide an extremely cost-effective solution for high quality requirements," says Dr. Wirth's Managing Director Wolfgang Dammer.

Buchholz adds: "The laser system performs fully automated multipass engraving with an engraving depth of up to 1000 µm and is designed for a maximum geometry of 2650 mm WOB and a circumference of 1500 mm. Even today, many embossed motifs are still done by hand. The Cellaxy makes direct laser engraving of embossing rollers not just much faster, more cost-efficient and environmentally friendly but, first and foremost, more reproducible, too. The 3D embossing processes achieved with Cellaxy are

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highly impressive thanks to long-lasting tactile features and maximum attention to detail. This applies equally to micro-embossing over large areas and background textures."

Gravion describes itself as a "digital factory" in the production of embossing rollers. All processes are digitally structured and mapped in an ERP system. The measurement data used in quality assurance processes for the embossing forms is also collected and recorded digitally. "At Gravion, we have put in place a fully digital production workflow so we can achieve high-quality 3D embossing structures very quickly," concludes Buchholz.

More information about Gravion is available at www.gravion.eu.