Manufacturing and printing carpets goes digital

Printed carpets and doormats are eyecatchers at indoor areas, and are applied accordingly by interior decorators and interior designers.

There are practically no limits for designing floor coverings, and the results are really stunning. Individual carpets, printed digitally, are perfectly suitable for fitted carpeting, drawing every visitor’s attention at exhibition booths or at event locations. Corridor carpets in office areas or doormats with the shop’s logo not only set new focuses in interior design, they also are efficient promotional messengers.

The machinery at ZIMMER AUSTRIA enables them to cover projects of this kind. The Tyrol-based manufacturer of digital printing systems, with locations in Klagenfurt and Kufstein, offers solutions for efficient digital printing and for functionalisation (digital coating) for almost all kinds of applications. This company already exists for more than 145 years, and has specialised in the production of machines for textile and carpet finishing (digital printing, flat screen and rotary screen printing, coating, steaming, washing, drying). ZIMMER AUSTRIA serves customers around the world, with partner networks in many countries and with their own sales and service companies in the United States and in China. This enterprise focuses on these 5 business segments: floor coverings, textile printing, narrow fabrics printing, functionalisation and tailored solutions. This specialisation is expected to lead to individual business opportunities in niche markets such as the automotive business.

„Heavier textiles require highly elaborated processing lines“
Tony Naschberger, CEO of the ZIMMER GmbH Digital Printing Systems Kufstein, explains: “We are the leading manufacturer of special purpose machinery manufacturing for heavy textiles. For 40 years now, we have accumulated know-how concerning digital printing. It is a fact that heavier textiles require higher elaborated processing lines. We adapt the processes to any kind of application, and we even integrate our existing CHROMOJET spraying nozzles together with the COLARIS piezohead technology.”

To cover the complete range of applications, ZIMMER develops individual solutions, in order to achieve high-quality results. “No matter whether the carpet consists of polyamide, of polyester, or of wool” as Naschberger explains.

The range of COLARIS models starts with the sampling machines, and extends up to machines with a working width of up to 5.20 meters for carpet printing. All models are available with a large selection of configuration options, including 4 up to 12 different colors and reactive / disperse / pigment or VAT-inks.

To offer perfect solutions for all fields of applications and for all ink classes, ZIMMER AUSTRIA furnishes their COLARIS machines (from the sampling solution up to the largest production machine) with several types of circulating inkjet printheads type Dimatix StarFireTM SG1024 from manufacturer FUJI. They are especially helpful to ensure reliable production operation when using disperse, pigment or VAT-inks.

To achieve a fine appearance of the printed design, the carpet requires deep penetration of the inks (see the illustration above showing deep ink penetration). For this purpose, ZIMMER AUSTRIA has developed their own “Penetration Booster Technology”. This technology offers deep ink penetration under high printing speed for carpets from 200 up to 1,600 g/m².

Digital solution for VAT printing

Together with DyStar, a worldwide provider of inks, chemicals and services, ZIMMER AUSTRIA has developed the digital VAT printing process. Using VAT dyestuffs, especially for cellulose-type fibres, offers several advantages: VAT printing is renowned for extreme light and washing fastness, and is suitable for high-quality upholstery, for towel printing, for work clothing, uniforms and camouflage printing. The first VAT printing line has already been delivered, and the customer has successfully started operation.

Pigment inks are completing the portfolio of ZIMMER AUSTRIA. “This way our customers enjoy all options to achieve good authenticity when producing for the home textiles market, curtains, cotton bags or decoration objects,” Tony Naschberger explains. “But applications for outdoor use from sunblinds until tarpaulins can be produced as well.”

The complete product range of digital printing can be experienced at the company’s Technology Centre in Kufstein. From the end of 2017, their showroom will be enhanced by printing lines for VAT and for pigment printing. The Technology Centre, inaugurated in July 2016 and covering an area of 2,000 m², also includes seminar rooms and an ink lab. ZIMMER AUSTRIA will also exhibit novelties, individual prints and a wide range of designs at the upcoming exhibitions “Heimtextil” and “Domotex 2018”.

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