

Zimmer's COLARIS, a big success in India

ZIMMER Austria is an expert for printing on heavyweight textile substrates, covering anything from woven, nonwoven, velour, plush, terry, artificial fur, or other voluminous substrates such as carpet of different construction and pile weight range up to 3.000 g/m² and more.

Being in manufacturing and service to the textile producers since 1876, with more than 140 years of expertise mainly dedicated to the printing technology, ZIMMER has proven to be a reliable and trusted partner to textile and carpet printing industries.

ZIMMER is a pioneer in flatbed and rotary screen printing and is credited with numerous milestones such as the first semi-automatic flatbed textile printer in the early 1950s, the world's first rotary screen printer in 1955, first carpet flatbed printer in 1962, the first intermittent rotary screen printer in 1968.

The first digital carpet printer Chromotronic was built and supplied by ZIMMER in 1976 and the revolutionary and breakthrough digital carpet printing has begun with the Chromojet valve-based technology in 1980. Since then carpet printing has been dominated by digital printing.

In 2008, ZIMMER Austria introduced a brand new generation of digital printer, under the brand COLARIS, based on the piezo technology. Today more and more Chromojet printers are substituted by COLARIS printers.

By concentrating mainly on heavy weight substrates, COLARIS has become a synonym for special applications since then. Velour and terry towel print installations are the key projects for COLARIS in textile applications. Well-known companies like Welspun, Golden Terry Towels and Srinath Cotton Combines are Indian terry towel manufacturers who are successfully using their recent COLARIS installations.

The COLARIS printer is a modular built digital inkjet printer that can be scaled for all kinds of applications through various layout options and having possibility to choose from different print head models of FUJIFILM Dimatix Starfie™. With native droplet sizes from 6 pl to 80 pl, a variety of print heads are available to match perfectly with the requirements of a customer.

The Starfire™ GS-1024-MA type print head is operated with a grey scale mode, offering 30 through 75 pl at a high firing rate and delivering the ink amount required for vibrant colours and deep shades on voluminous substrates like terry towels. With colour configurations from four through eight reactive ink shades, a wide colour gamut is available and high productivity is guaranteed.



Reactive towel printing as such can be done in different ways. Most common way is to print on a ready for inkjet printing fabric. The substrate is run through a padder filled with reactive pre-treatment chemicals (thickener, bi-carbonate, urea, wetting agent) and is dried inline on the stenter. The dried and rolled fabric will then be printed with COLARIS digital inkjet printer, using 4 through eight colours, with additional penetration booster to have a uniformly, controlled penetration of the inks. After printing, the fabric is dried inline. For ink fixation the fabric will go offline through a loop steamer. Final post print wash will be required, and conventional finishing may be an additional process applied.

An alternative way is digital inline inkjet pre-treatment with a Chromojet based digital pre-treatment unit called CHR-DPT, installed on the COLARIS inkjet printer. With this CHR-DPT unit, the pre-treatment chemicals are directly applied to the terry substrate and will be pressed into the substrate. Printing will be done on the moisturized fabric without intermediate drying. This allows a perfectly controlled penetration at deep and bright colours. The required ink fixation process can either be done by an inline fixation with a special horizontal steam drying machine type Thermofix SHS or by inline drying in a conventional hot air nozzle dryer, followed by an off line steam fixation in a loop steamer. Of course, the post print washing and conventional finishing will also be required to achieve fine towel qualities.

Various optional devices are available, which will allow control, i.e., weft alignment within the print line or read the individual towel length. Differences in towel lengths can automatically be compensated to keep continuous track of design repeat with slightly varying towel lengths.

A.T.E. Enterprises takes care of the marketing and sales of ZIMMER Austria in India. With highly qualified and well trained engineers and with A.T.E.'s pan India network, ZIMMER Austria and A.T.E. are committed to serve their customers to the best.