

# Digital Design

**Bindu Gopal Rao** shares with us some thoughts about the digital textile printing industry of India and compares it to other advanced centres across the world.

**D**igital textile printing is as an inkjet-based method of printing colours onto fabrics including silk, cotton, wool, viscose, linen, rayon, jersey and synthetic. It allows for the printing of any kind of colour and photographic images. With no limitations as far as quantity, size and speed are concerned, the possibilities are infinite, thereby finding favour with manufacturers and designers alike.

## GOING DIGITAL

Digital prints are images printed using a digital printer instead of a traditional printing press. As markets mature and the choices available to the customers increase, everyone wants a larger collection of designs and minimum quantity per design. "This is something that conventional printing cannot fulfill and this is where digital prints come in. There is no minimum quantity requirement, there is no need to worry about the number of colours





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custom-made prints on your favorite lingerie,” says the spokesperson of Zivame.com. For customers, this works as a win-win situation because they get their required quantity, all kinds of designs can be ordered and they can test the markets and re-order if the design works or drop the design if it fails. Digital prints are being used because they provide endless designs in customisation experimentation and trendy apparels.

“Digital printing offers faster processing speed. It works out very cheap while producing fashionable clothes of any size as there is no limitation on repeat size as in case of traditional printing methods,” says a spokesperson from Myshopbazaar.com. Digital prints happen without the texture of the print being noticed on the surface. It’s almost as if the design is a part of the fiber of the fabric. “Moreover, digital print inks are eco-friendly and garments made using this print medium can easily carry a green label. The longevity of the print is a lot more than the traditional print methods and degeneration does not happen very easily,” says Bimal Kumar – Managing Director, Fifth Avenue Retail Pvt. Ltd. Digital printing work areas are more refined work hence garment rejections are less, and wastage of ink is negligible unlike other forms of printing. “Prints have always been a rage in India but the designs were not as strong and bold as they are today. Digital prints add the right amount of jazz to an outfit with an extensive palette of colours, shapes and designs to choose from and are easily wearable as well. Digital prints, however, are abstractions made by the designer and cannot be copied. This exclusivity is also more attractive to the customer,” explains Parinita Saluja, Production Director, KBSH. The uniqueness of digital prints lies in the fact that they give designers a lot of creative

in your design and you do not need to spend time to colour separately, create screens, etc., thereby getting overall production time down to nearly one third of conventional printing,” says Anish Maheshwari, Owner, Krishna Alkali (Bom) Pvt. Ltd. Digital printing has several advantages over traditional methods of screen printing or rotary printing. “It is possible to do very intricate and detailed printing with this technique. In lingerie, this is mostly used for printing fabrics like soft silks and satins for high fashion lingerie and specialised orders. You can even have





to it is the feel of the print, which is silicon. The stores and runways this spring are full of clothes with intricate prints, not just flowers but unique, often enigmatic designs resembling artwork. "It is all symmetric patterns, nothing in specific, ranging from floral to animal to polkas to celestial. The basic idea is to create a no-balance effect and yet make it look appealing while also creating the feel of silicon," says Nidhi Guptra, Head – BYSI India. Leopard print (animal print) is the most sought after among youngsters and Myshopbazaar.com is providing a



flexibility. "Another interesting part of digital printing is photo prints. This allows people to even personalise their prints. One of the biggest advantages of digital printing is the option to make changes immediately while creating a fabric. It's possible to go from the design stage to the finished fabric in a matter of weeks. This allows you to take advantage of current trends, and even change prints or colours, mid-season," explains Meena Bindra, Chairperson and Head of Design, Biba.

### TREND ALERT

Trends are moving towards placement of floral and water prints in tops. Paisleys are making a great presence in international as well as domestic market. The trends are continuously changing and this is something that is

possible to adapt to in digital printing, because of the fact that it is possible to change the designs and colours on the fly. Digital prints are a fashion-forward trend as far as clothing is concerned. There is a vast array of fabric to choose from in digital prints, and we have to spin off this trend to create distinct pieces. "The summer trend for digital prints is floral and neon colours teamed with bold, solid colours to make a fashion statement. Hot pinks, orange, fluorescent yellows have caught the attention of our designing team and we have designed pants and trousers in digital prints using these colour combinations," says Gurprit Sawhney, Promoter at Trendy Divva. The special feature





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wide range of stylish tops, dresses and gowns in animal prints at discounted rates! Advanced computer technology can now help you wear graphic designs, geometrical shapes, even a stamp or a photograph you love. “From bold stripes to psychedelic, digital prints are back with a bang and are sharper than ever, adding just the right amount of zing to the fabric. Also, with the changing trends, the colour palette has become extensive and the fabrics are becoming versatile,” says Saluja. Harsh Gupta, Founder and Creative Director of Harsh Harsh, adds, “In the Indian traditional-wear market, digital prints are visible on saris, tunics, kaftans and stoles with mostly gems-jewels-, paisley- and flora-fauna-inspired prints. In the international market, designers are experimenting with new topics and inspirations, sometimes mixing up two different themes to create an interesting image on garment.”

### TECH TALK

Digital prints are mostly produced by inkjet printing technology. The technology has continued to develop since its invention and there are now

specialised wide-format printers. The inks used in digital printing are formulated specifically for each type of fiber. Inkjet technology and specially developed water-based ink (known as dye-sublimation or disperse direct ink) has offered the possibility of printing directly onto polyester fabric. “Printing onto nylon and silk can be done by using an acid ink. Reactive ink is used for cellulose-based fibers, such as cotton and linen. Using inkjet technology in digital textile printing allows for single pieces, mid-run production and even long-run alternatives to screen printed fabric,” says Gupta. Digital printing is done with the help of a computer through design softwares such as Adobe Photoshop and Illustrator. It does not involve any heat transfer as the ink is directly printed on the fabric. The rate at which technology in this medium is growing, there is almost nothing that one cannot do with digital printing. Today, you can print in any size and any shape on fabric rolls, cut components and finished garments. “We produce close to 1,20,000 meters of digitally-printed fabric each month and





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and if the fabrics are not prepared and finished correctly, you could be stuck with huge rejections,” says Maheshwari. A few challenges that are faced while creating digital prints is colour bleeding, blurred prints, over-printing on the fabric and a particular colour not coming out as sharp on the fabric as expected. “The biggest challenge is the limitation in the availability of good digital printers, since the technology is still in its growing stage in the country. And since there are limited options available, the ones which are good are comparatively expensive. However, as time goes on and the technology continues to develop, it will undoubtedly become more affordable,” hopes Bindra. According to Monica Oswal, Executive Director, Monte Carlo Fashions Ltd., “Since this whole technique involves various steps of padding, heating and then transferring (as the technology is not that advanced yet), it is more time consuming. This automatically increases the production time as it involves few more variations in print. Contrary to this, if digital printing is used in printing running fabrics, both the issues can be answered. Another name of this technique is reactive printing. As the name suggests, it is done using the chemical reaction between inks and natural fiber.”

This industry is growing at a decent pace and everyday you have a new printer who wants to test the markets. Conventional printing machines are being replaced with digital printing machines across Europe and America, and this trend will surely be visible in cheaper production centres such as India, soon. The question then is, how well is India prepared to take on the digital wave. ❀

that requires inkjet printers, chemicals, photographic paper and plastic film. This printing process requires pre-treated fabric that could easily absorb inks of all types including reactive, pigmented, acid, disperse and other non-reactive inks.”

### OVERCOMING HURDLES

The cost of getting trademarks on digital print is very high, which is why most of the fabric is directly sourced from the textiles. Digital prints are expensive and the number of units capable of digital prints are far fewer than those with regular screen printing or partly mechanised screen printing outlets. Also, the capital and cost of consumables is certainly much higher than the traditional printing units. “We, as an industry need to invest more in the pre- and post-treatment of fabrics. I think this is one point where we are weaker as compared to our counterparts in Italy, Turkey, etc. This is even more important now because the machine speeds are becoming really fast

the entire production is with reactive inks. As far as machinery goes, you have all kinds of them now. Speeds are right from 100 meters a day to 4,000 meters per day. There are a couple of other printers but the number of installations is not that large yet,” opines Maheshwari. Heena Malhotra, Designer at Chhabra 555 adds, “To get a photo-realistic effect on the fabric, the fabric has to go through pre-to-post treatment