

Plastics in Packaging

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STEPPING OUT OF THE SHADOWS

*Meet the man helping to
put blow moulding back
in touch with its history*

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Direct-to-shape (DTS) digital printing is a technology that is moving the decoration of cylindrical containers to a new level. One company committed to this technology is Velox, whose IDS 250 system, combining Adaptive Deposition Architecture (ADA) and Variable Viscosity Ink (VVI), is said to be offering exceptional print quality and great operational flexibility at production speeds of up to 250cpm.

Capable of printing with no seam, gap or overlap, the system's 360-degree photorealistic images would be eye-catching at any time. What sets the Velox technology apart is its ability to tackle commercial production while maintaining colour and image quality, at speeds that have only previously been seen in non-digital printing environments. Beyond this, of course, it offers advantages that set it apart from analogue technology. These include a near-zero setup time and the elimination of consumables such as plates, screens and blankets.

With technology that is designed to ensure consistency throughout a job, across multiple decorators/locations and on into repeat orders, the quality of the product is no longer reliant on the skills of an operator. In fact, the easy-to-use workflow-optimised software suite and automated mechanisms promise a quick learning curve for staff.

These features make it easier to customise print runs, change designs, test proofs and effect short runs, giving brand owners and designers greater flexibility to trial ideas quickly.

Further enhancements can be seen in the ink technology, where there is no need for pre-treatment, base coating or over-varnishing – suggesting further savings through a reduction in line equipment and a smaller footprint.

The UV inks in the VVI range have been specifically formulated for digital printing, with vivid process colours, controlled opacity and efficient coverage. The inks are said to have excellent adhesion and functional properties on a variety of substrates.

Printing of up to 15 colours simultaneously is aided by an ADA that maintains a high-accuracy transfer of ink to the surface of the container. The accurate placement of each drop helps to create high-resolution images with precise colour matching.

Although there are other digital decorators able to perform some or all of these tasks, Velox believes that the low total cost of ownership, higher print speeds and what it describes as an 'industrial grade digital printer', will allow the IDS 250 to take the place of analogue systems at packaging manufacturers.

Marketing manager Marev Sheffer explains: "The speed we built into our solution was chosen in order to ensure full performance even with the fastest production lines of the relevant container. But actually it's even faster.

Dream catchers

An Israeli company has launched what it claims to be the world's only direct-to-shape industrial-grade decorator for the mass production of cylindrical containers, and is set on helping brand owners realise their dreams. **Steven Pacitti and Printz Holman report**



Above: The IDS 250 is an 'industrial grade digital printer'

Right: Opaque white enabling sharp text and photo realistic images on a dark substrate

That's because, unlike analogue decoration technologies that require you to stop the entire line for a job changeover, the Velox digital decorator eliminates the setup time. This allows for practically non-stop production and as a result increases line capacity."

The range of innovative features also suggest that use of these systems by fillers could offer far greater flexibility, cost savings, a shorter key supply chain, and reduced inventory and warehouse space. It would also allow brand owners to react more speedily to seasonal changes and unexpected product demand.

Velox estimates that production costs per digital print on batches of any size are competitive with those of analogue prints produced in long runs. In recent demonstrations of the IDS 250, Velox has shown it to be capable of printing on post-consumer recycled plastics, while an early user of the system, LageenTubes, is already printing personal care packaging made from sugarcane-derived renewable plastics.

Experience gained in commercial production has highlighted a number of sustainability and environmental advantages, including the elimination of set-up waste and associated consumables, lower energy and transport costs, and reduced energy consumption.

Multiple projects are underway, explains Sheffer, but the company cannot currently disclose any details. However, she points to an extremely positive K 2019 show, with a number of tube and aerosol manufacturers showing interest in the technology.

"Superior decoration quality and additional

capabilities, like printing on the cap, tactile embossing, and end-to-end decoration, created a lot of interest," says Sheffer. "This was coupled with the understanding that there is finally a technology on the market that can achieve mass-production quantities with digital-print agility."

In addition, Velox thinks that digital technologies are well-placed to support a shift to new materials. "Velox DTS-Inkjet technology achieves the same decoration results on eco-friendly substrate materials as it does on traditional plastics," adds Sheffer. "There is also clear evidence that direct printing technology is strongly synergistic with the trend for mono-materials, to ease recycling eco-systems.

"The Velox inks behave in the same way as other inks used in direct-to-object decoration. The benefits of the Velox technology, in the context of recycling, is more as an enabler for the recycling of the container itself, since it synergises with the general direction of mono-material, which makes it easier to recycle.

"DTS digital decoration for mass production is undoubtedly the future and we believe that the Velox IDS 250 is the right step in that direction."

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