

MGI JETvarnish



After printing the sheets pass under an infra red heating unit which causes the droplets to flow together and smooth the surface. The actual gloss level is determined by the number of droplets per pixel applied by the printhead.



The control panel lets you adjust the sidelay guides, for position and skew, and the set up the feeder, conveyor, IR and UV processes, as well as starting and stopping production.



The print unit contains a page-wide inkjet array for single-pass application of the liquid varnish at 360 dpi. A second row of heads will soon be optional for inline printing of spot colour or a second type of UV coating.



The offset style pile feeder and the sidelay guide can be set up to position the sheets precisely under the print head. The MGI front end software then allows exact positioning of the image over the sheet.



After the IR stage the sheets pass under the ultra violet lamps, which polymerise and cure the varnish, so it emerges dry into the delivery stacker.



First announced at drupa in May 2008, MGI's JETvarnish is a specialist inkjet that's tailored made to apply spot and flood UV clear varnish in several gloss levels, controlled by digital artwork. It's intended to make spot UV varnish affordable in very low quantities and with minimal set-up. It will shortly be able to handle variable data too, though this is seen as a lesser requirement than short run fast turnaround work for digital and offset print. Also on the way is an optional second inkjet head inside the main unit, that will apply a spot colour (opening up the potential for one-pass personalisation) or a clear security marking.

MGI is also dropping heavy hints about a metallic facility before long, though isn't revealing anything about the process, such as whether it is a special ink or cold foiling.

The machine is priced at £179,000 in the UK, but its big selling point is very low running costs, according to David Evans, managing director of UK distributor MGI Technology. 'Normal screen printed UV smells bad and has a long set-up time,' he says. 'The minimum practical run is 1000, so you'll get charged that even for shorter runs. So printers rarely propose spot UV as it's a hassle and needs outsourcing, as well as taking time, for little extra profit. JETvarnish lets them bring work inhouse and make money, even from short runs. There are no plates, no screens and little setting up is needed.'

One 6 litre bag of clear UV ink is enough for 42,000 B2 sheets assuming a typical 10% coverage. According to MGI this works out at 1.2 Euro cents per sheet (call it 1.1 pence). 'So it costs £11 for a thousand sheets and you can charge another £300 on the job,' says Mr Evans.

Kevin Abergel is international sales and marketing manager for the manufacturer, MGI Digital Technology in France (the two companies are separately owned, despite the names). 'Whenever our customers proof a normal job now they can run one or two overs with spot varnish and show them

to the client, and say for a little extra they could have this effect,' he says. 'They use the JETvarnish to sell up, and make more on the job.'

'Once we sell one JetVarnish into a country, after three or four months we get a huge number of enquiries from other printers in that country. The first user grabs a market share and other printers have to scramble to catch up.'

When JETvarnish was originally announced at drupa MGI was planning a B3+ format, to complement its own Meteor DP60 digital colour press as well as other sheet fed toner presses. However, says Mr Abergel: 'All the printers we talked to said it was a great idea, but they wanted something bigger for the B2 market.'

A hasty return to the drawing board saw the design enlarged to B2 in time for the first prototypes to be ready by the autumn of 2008, remarkably only six months after drupa.

Deliveries started soon after and the machine has sold very well, with about 20 in France and a total of about 65 delivered worldwide. So far there are none in the UK, partly due to MGI's first distributor GAE going out of business at the end of 2009. Late last year David Evans set up MGI Technology as a trading name of his company Printbyte Ltd, to distribute the range (*Digital Printer February 2011*).

There's now a showroom in Hemel Hempstead housing a Meteor DP60 Pro, DF360 finisher and a UVarnisher flood coater, though not yet a JETvarnish. Mr Evans is establishing a dealer network throughout the UK, with the first being M Partners in south London. He's hoping to be able to announce the first JETvarnish sale any time now.

So, how does it work? As the picture shows, the JETvarnish is built around conveyour unit, fed by

a 60 cm high suction pile feeder. Motor-adjusted sidelays align the sheets, which then pass under the full-width 360 dpi inkjet head (in the tall central unit in the photograph above), then through a tunnel containing infra red heaters, then UV curing lamps, then finally out to a 60 cm high stacker. The speed is 50 cm per second, with the first sheet emerging in 16 seconds. No preheating stage is needed.

The feeder and stacker capacity is about 4000 sheets of 135 g/m² weight. The minimum sheet size is 210 x 300 mm, and the maximum is 520 x 1050 mm.

As explained on pages 14 & 15 the printhead can be commanded to print one, two or three droplets per pixel, for satin, normal or ultra gloss. The front end software can detect this from grey levels in the 'black mask' artwork file, or the gloss level can be set from the control panel, for flood coating. MGI has worked very carefully on the chemistry of the varnish, it says, for appearance, handling, low odour and costs.

Digital artwork is converted to TIFF format for output and MGI Editor software is supplied that can open this and adjust any element, including selecting items to move or delete, or add new ones, or to change the scale, skew or trapezoidal shape.

The MGI Workstation Manager (WSM) Production front end lets you set up the imported artwork for print, with the option to adjust the scale as well as the position on the sheet in case it doesn't quite match a pre-printed image. Likewise the touch panel controller adjust the sidelays for position and skew as well as sheet size and thickness, so the varnish image registers with the image on the sheet.

Finally you load the file, set the transport going, start printing and as the last page of the user guide suggests, make money!

Contact: www.mgitechnology.co.uk