Mutoh again opts for eco solvent

By **Ton Rombout**

Mutoh surprised at the beginning of this year with the announcement of the new generation XpertJet Pro printers, in two models for now: the XpertJet 1341SR Pro and XpertJet 1641SR Pro. Both printers are equipped with a 4 color eco solvent ink set. They share the technology, but differ in print width and capabilities. I looked at the two printers in the showroom in Ostend, Belgium.

Mutoh is reluctant to change the design of their printers and follows the chosen path with the XpertJet Pros that have now been introduced. We see a black housing with a little bit of red, with that housing revealing little of what is under the hood. However, that is where the biggest change can be found.

New generation print head

These XpertJets are equipped with a new generation print head, referred to by Mutoh as AccuFine Head Technology. The head is 33 percent wider and covers a greater area per print pass. Where previously two rows of nozzles were necessary per color to apply sufficient ink, one row per color is now sufficient. These heads manufactured by Epson for Mutoh have different properties than the previous heads. The most striking feature is the higher accuracy with which the ink drops are fired and the higher basic resolution. Together with the wave technology adapted to the print head, which Mutoh refers to as i-screen, this leads to the next step in print quality. The supplied Vertelith RIP also contributes to the improved quality.

The screening algorithm used here effectively suppresses possible noise in the full color image.

A measuring eye, located next to the head on the print carriage, is used for fully automatic calibration of bi-directional alignment and media transport. For printing on less flat or thicker substrates, the head can now be set in at least 3 heights (1.5, 2 and 2.5 mm). The XpertJet 1641SR Pro even has a fourth position of 4 mm.

XpertJet 1341SR Pro

The XpertJet 1341SR Pro, the successor to the ValueJet 1324X, which has been available for more than ten years, prints on rolls up to 137.1 cm wide. The print speed has almost doubled. It is not really comparable one-to-one because of the changed print resolutions and the improved accuracy in the positioning of ink droplets. This will make you more likely opt for a faster print mode. At 600 x 1200 dpi, approximately 10m2 per hour. In practice it will be a print mode that can be used for many things, see the prints in the showroom. A non-driven collection roll is supplied as standard and rolls up to 19 kg can be processed. As an extra, a motorized collection unit can be placed, for rolls up to 20 or 30 kg.

With regard to the ink, there is a choice of 220 ml cassettes or 1 liter bags. The MS 31 ink for this printer has a shelf life of about 2 years, so 1 liter ink bags are obvious. The Mutoh XpertJet 1341SR Pro takes up relatively little space due to its compact construction. The rear must remain accessible for loading media rolls.

XpertJet 1641SR Pro

The XpertJet 1641SR Pro succeeds the XpertJet 1641SR. This XPJ-1641 SR is of a more recent date. Still, there's still quite a big

The Mutoh XpertJet 1641SR Pro in the showroom.

leap in print speed here. The AccuFine print head provides better print quality and higher potential print speed. The speed is slightly higher than the smaller 1341SR Pro. The print head can apply much more ink per pass, so that you hardly lose colour strength with fewer passes. For outdoor applications, you can opt for a lower print resolution, making 16 m2, or even 29 m2 feasible.

The XP-1641SR Pro comes with a motorized retractor. Standard, it can handle rolls up to 30 kg. A 40 kg or 100 kg unwinding and rewinding unit are available as an extra. The printer uses 1 liter ink bags MS-41 ink, similar in composition to the MS31 ink. Both inks received a GREENGUARD Gold certificate which indicates that these inks can be used for eg wallpaper in critical environments such as classrooms or hospitals. They are therefore suitable for both indoor and outdoor use.

Nozzle Check Unit

Optional for the 1641SR Pro is a Nozzle Check Unit. This can detect missing nozzles, after which a cleaning action follows, the result is checked again and the printer continues its task. If a few nozzles fail, they are switched off and the printer can finish its job. Especially in combination with the 100 kg unwinding and winding unit, interim automatic checking of the nozzles can prevent costly mistakes. Those who start with the standard version or who process 40 kg rolls can also benefit from the Nozzle Check Unit. It fits in with the trend to have more actions performed by the equipment, so that the print quality is less dependent on the alertness and skill of the operator.

VerteLith RIP or third party RIP

The new generation print head in these XpertJets provides a significant step forward in both print speed and print quality. They offer extra value for money compared to the cost of purchase and use.

Whether the VerteLith RIP included in the price contributes to this depends on the existing situation. A number of sign makers have been using successive generations of a third party RIP for years, which they can use to read and write, and which also controls printers from

The compactly built XpertJet 1341SR Pro.

The distance between the feed roller and the print path is minimal.

multiple suppliers. In a number of cases, the third party RIP also supports print & cut workflow with various cutting equipment. Switching is then less obvious.

The VerteLith RIP, in turn, contributes to simplicity of use and optimum print quality thanks to the Harlequin screening technology used. Until now, anyone who has only used an entry-level version of a RIP that was once delivered with the printer will now receive a lot of extras with this VerteLith RIP. This can also be the deciding factor to choose a Mutoh XpertJet.

Both XpertJets Pros are the harbinger of more news that may be announced during FESPA in Berlin. Such as an XpertJet 1682SR Pro equipped with 2 print heads. Since Mutoh equips the current XPJ-1682SR with an ink configuration with orange ink, there is more demand for this.

There is also news to be expected in the field of ink. In addition to the current ink set, a new ink adapted to the latest standards and with an accelerated drying time will be introduced.

The printer keeps track of consumption and when changing rolls in the meantime, the printer prints this after which the code is read when the roll is placed again

VerteLith RIP

From now on, your own RIP is included. The VerteLith RIP can also be used with the Mutoh object printers, the hybrid UV LED printers and the other sign and display printers from the current range. Precisely for use with object printers, this VerteLith RIP offers handy extras that make working with FC plus white and the use of a jig on the printer easier.

Mutoh engaged software developer Harlequin, who has experience building software RIPs from the ground up based on their proprietary PDF rendering technology. That offers advantages. All functions are quickly available via tabs. Ringing or tiling and printing of jobs is also provided, as is file nesting for optimal use of the substrate.

The RIP only creates cut files for its own Mutoh cutter. In all other cases you have to create it with the software that controls the cutter and then import the barcodes and other attributes. It is precisely the lack of unity in this area that makes it difficult to provide this in the RIP, according to Mutoh. It makes building a fully automated workflow more complex. Settings made can be saved and recalled immediately. Mutoh is now also developing its own media library for the VerteLith RIP, with color profiles for the most common substrates. It will take some time to build it. A profile editor is also provided. If you have a suitable spectrophotometer, you can make the profiles yourself.

Up to 4 Mutoh printers can be controlled with a single VerteLith RIP. Those who already own another brand of RIP can use the VerteLith RIP as a relay station thanks to the predefined settings, while preserving the bi-directional communication/printer monitoring between the VerteLith RIP and the printer.

Automatic calibration of bi-directional alignment.

The 1 liter ink bags on the XpertJet 1341SR Pro.