

ValueJet VJ-1638UH has own unique market position

Added value applications



By Herman Hartman



The Mutoh ValueJet 1636UH.

About two years ago Mutoh launched the ValueJet VJ-1626UH, a hybrid printer equipped with LED UV ink. The VJ-1636UH is now also available. It shares a number of specifications with the 1626UH and, equipped with a second head and extra UV LED light source, it is twice as fast.

During a visit to Mutoh in Ostend we were given more information on the printer's possibilities and applicability, which proved to be more diverse than anticipated.

Positioning

Mutoh is not the first manufacturer to equip printers with UV ink. However, their approach in which an existing print engine has been adapted for use with LED UV ink shows that they are charting their own course. This is also clear from the positioning. The accent lies on using it as an industrial printer for applications previously involving screen or pad printing and specific applications such as the production of prototype packaging, and the application range will be extended even more in the near future. The VJ-1636UH is now available with the hard LED UV ink, which is also used in the VJ-2636UH and the VJ-426UF table top

model. During the first quarter of 2017 Mutoh also expects to introduce a flexible variant of its LED UV ink, bringing more typical sign applications within reach of the printer's capability. Similar to the present ink, the new ink will be free from volatile organic components (VOC) and virtually odourless (which is not always the case with a UV LED ink).

Principle

The VJ-1636UH is based on the same principles as the VJ-1626UH. The 1615 mm maximum print width and 15 kg maximum plate weight are the same, as is the maximum substrate thickness of 15 mm. Both systems also incorporate electronic height measurement for the substrate, although on the 1636UH the material height is measured immediately at the side guide.

The input and output tables are also identical. The VJ-1626UH was the first to incorporate a mechanical front and side guide for plate material, some details of which have been changed on the 1636UH. Although it is an extra, this option is actually essential when processing plate material or templates.

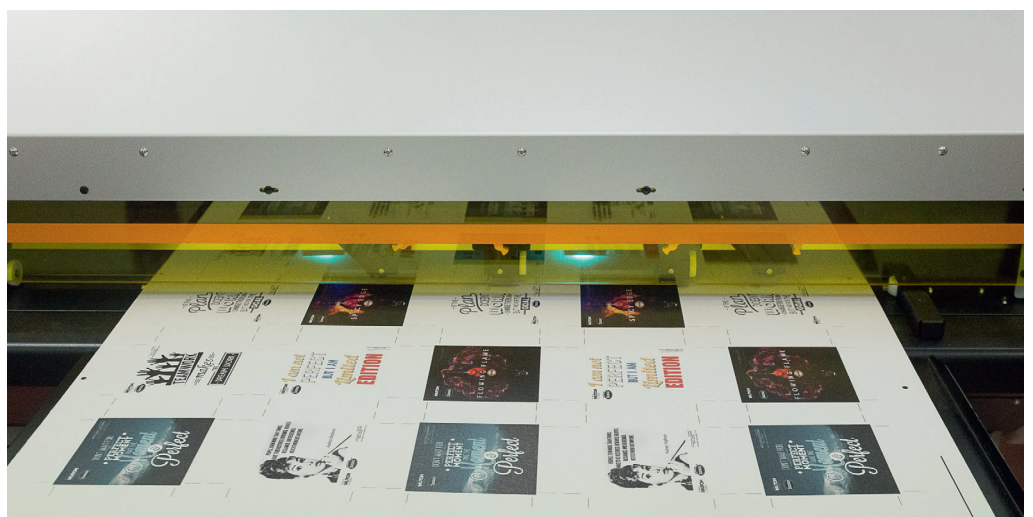
Two heads

The VJ-1636UH is equipped with two staggered print heads and 2 LED UV lamps, which doubles production compared to the 1626UH.

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The mechanical guide.



The ValueJet 1636UH at work.



An extensive range of applications.

The VJ-1636UH is available in a four colour version, or a version with white and lacquer in addition to CMYK. With the latter two rows of nozzles are available for white and lacquer. The maximum achievable print speed on the 4 colour version is a good 22 m² per hour in 720 x 720 bi-directional. Merely using CMYK the 6 colour version reaches only half that speed. When working with 2 layers on the 6 colour version, with white and lacquer in addition to CMYK, the maximum speed is 5.5 m². This maximum speed delivers a saleable product. The actual speed that is feasible in practical applications is directly related to the application, even more than with (eco) solvent. In 2 layer mode with a resolution of 1440 x 1440 dpi bi-directional the speed is a mere 0.73 m² per hour, but you can still produce razor sharp prints of 4-point text.

It is also possible to print more than two layers. Using lacquer you can print Braille or introduce a relief structure in the print, in which case the layers are built up consecutively without moving the media.

Control

Using all the functions with colour and lacquer requires an RIP that can manage all the extras offered by the printer. Suitable RIPs are currently available from, amongst others, Onyx, Caldera, Wasatch and Ergosoft. However, the LayerEditor software tool, which we are familiar with on the smaller VJ-406UF, can also be used. This software tool, which is actually a Windows driver, is now being adapted to control both 160 cm models. In many cases the LayerEditor is sufficient for objects printed using a set template.

Guide

Using a template it is possible to print small objects in series. The maximum weight and relatively low maximum material thickness necessitate a low weight and thin template

base. Another application involves previously cut beer mats being printed and then removed. Applications of this nature need to be inserted with great accuracy, which means that the above mentioned mechanical front and side guides are indispensable.

The printer is equipped as standard with a non-driven roll input, which can handle rolls up to 30 kg. Remarkably, there is no standard collection roll or cutting facility. Roll media are cut manually using a knife in the cutting trough. The existing Mutoh range includes a motorised 30, 80 or 100 kg roll collection system for media as an optional extra to the printer. In addition to the variation in layer thickness, other parameters can be used to achieve optimum prints, starting with the LED UV lamps positioned at both sides of the print heads. Each lamp covers an area slightly wider than that covered by the ink layer. Each UV lamp is also divided into zones in which the light intensity can be individually adjusted to manage the ink outflow. This not only impacts the gloss, but also helps to prevent visible bending in both the colour image and in white. It gives the operator plenty of choices to adapt the print result.

Ink bags

The printer is equipped as standard with the Mutoh ink system, in which holders in ink slots on top of the printer replace cassettes and are refilled using ink bags. CMYK and lacquer are supplied in 800 ml bags, white in 500 ml bags. Those expecting to use less ink can opt for the traditional 220 ml cassettes, which also fit into the slots on top. A circulation line is included specifically for white ink.

Flexible ink on the horizon

The showroom in Ostend can provide samples produced with both the existing ink and the new flexible ink. Adhesion to flexible materials

adds further applications to the printer's capabilities, although pre-coating may be required in more frequently in some situations to ensure optimum bonding on synthetics with low surface tension.

The Mutoh ValueJet 1636UH is still listed without extras at €39,995, which makes it exactly €10,000 more expensive than the VJ1626UH. The mechanical front and side guide for plate materials and driven roll collection system are extras. The ValueJet 1626UH and 1636UH are amongst the cheapest printers with UV ink and applications that deliver significant added value. In fact, it would be safe to say that the application is key with these printers and, even equipped with the existing ink, there are many. The printer would also be suitable as a production unit for a webshop offering a range of photo prints on hard materials. •



The ink cassettes are refilled using ink bags.