



Thermal Inkjet  
Bosch Packaging  
Technology  
Case study

# The total package is right at Bosch Packaging Technology

**Bosch has been active in the market as a supplier of Track & Trace systems for around ten years, and its Packaging Technology business unit has been using printing systems from Wolke by Videojet for packaging materials for about the same length of time.**

The partnership between Bosch – the globally active packaging machinery manufacturer – and Videojet, the provider of printing systems, exemplifies the importance of a strong customer-supplier relationship in the era of globalization and Industry 4.0.

Bosch Packaging Technology expertise is not just limited to its capabilities in developing machines, but the company is also able to offer its customers complete software solutions. Bosch sees itself as a comprehensive system supplier for Track & Trace, with respect to the end customer. The packaging machines are designed for use in both the pharmaceutical industry and in the food sector.

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Jörg Willburger, project manager  
Bosch Packaging Technology



**Jörg Willburger has been working as a project manager for Track & Trace with Bosch Packaging Technology for four years. His guiding principle in selecting and collaborating with suppliers is “to always successfully transfer the high quality standards, which Bosch customers expect from us worldwide, to our partners.”**



From Willburger's perspective, the experience with Videojet builds on this requirement on a one-to-one basis.

“From the very start, Videojet has distinguished itself by providing product quality that is highly reliable together with equally high standards of service. This dependability is the cornerstone of our business relationship. It is something that is repeatedly confirmed by our customers, as they share their positive experience of Videojet components with us,” he states.

Last but not least, according to Willburger, this dependability has also been a positive benefit for the seamless transition of Videojet product generations, from the Wolke m600 advanced to the m600 oem and m610 oem Thermal Inkjet (TIJ) printers. “Even with a previous record of positive experiences, we have always been impressed by how purposefully Videojet has introduced new technology options to further the development of our Track & Trace solution and used it to improve its own offer.”

For many years, the Wolke m600 advanced TIJ printer has been the standard for printing systems at Bosch Packaging Technology, in particular for machines in the CPS family. The Bosch CPS 800 serialization unit offers a “stable machine frame structure for pressure control and pressure ejection processes”, comments Willburger. A load cell is added with the CPS 1400 serialization unit, and the capabilities of the CPS 1400 are extended by a labeling function with the CPS 1900, which, for example, can be used for tamper-evident applications. In addition to using the Wolke TIJ family to apply DataMatrix codes to folded cartons for medicines, Videojet also manufactures printing systems for the HDPE bottles that are frequently used in the pharmaceutical industry (for the CPS 600 at Bosch), whereby appropriate labels are printed and applied to the body of the bottle.



**BOSCH**

Invented for life



For Steven Marks, Videojet Sales Manager OEM for Northern Europe, the success of the m600 oem and its younger brother, the m610 oem, is in particular just the logical step of applying “the optimum management of customer requirements as the yardstick for our own development work”. This is demonstrated by the example of Bosch. Marks explains,

“Even the product name confirms it: The m600 and m610 oem are completely orientated to the requirements of the original equipment manufacturers (OEMs).”

The overarching principle for transition from the older m600 advanced to the new oem product generation is primarily to extend the flexibility factor. This has a crucial aspect: The reduction in size of the controller – directly by about sixty percent compared to competitive systems. Willburger explains, “Now we have the advantage of being able to install a much smaller model in our control cabinets. This does not interfere with existing control units; rather on the contrary it gives us more space for other units.”

In addition to this, the controller does not require its own power supply and will perform without additional cooling in the control cabinet. Furthermore, in comparison with the previous model, integration of the printer into existing conveyor and packaging systems has once again been significantly simplified. For example, the m610 oem allows installation of a total of 18 different assembly versions.



"The new Wolke oem models offer our customers the opportunity to further reduce their printing costs by optimizing their ink consumption."

Jörg Willburger, project manager  
Bosch Packaging Technology



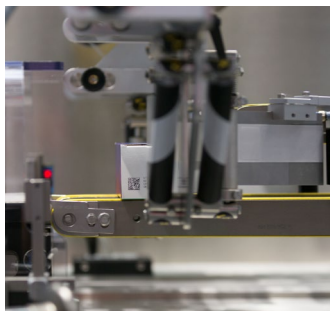
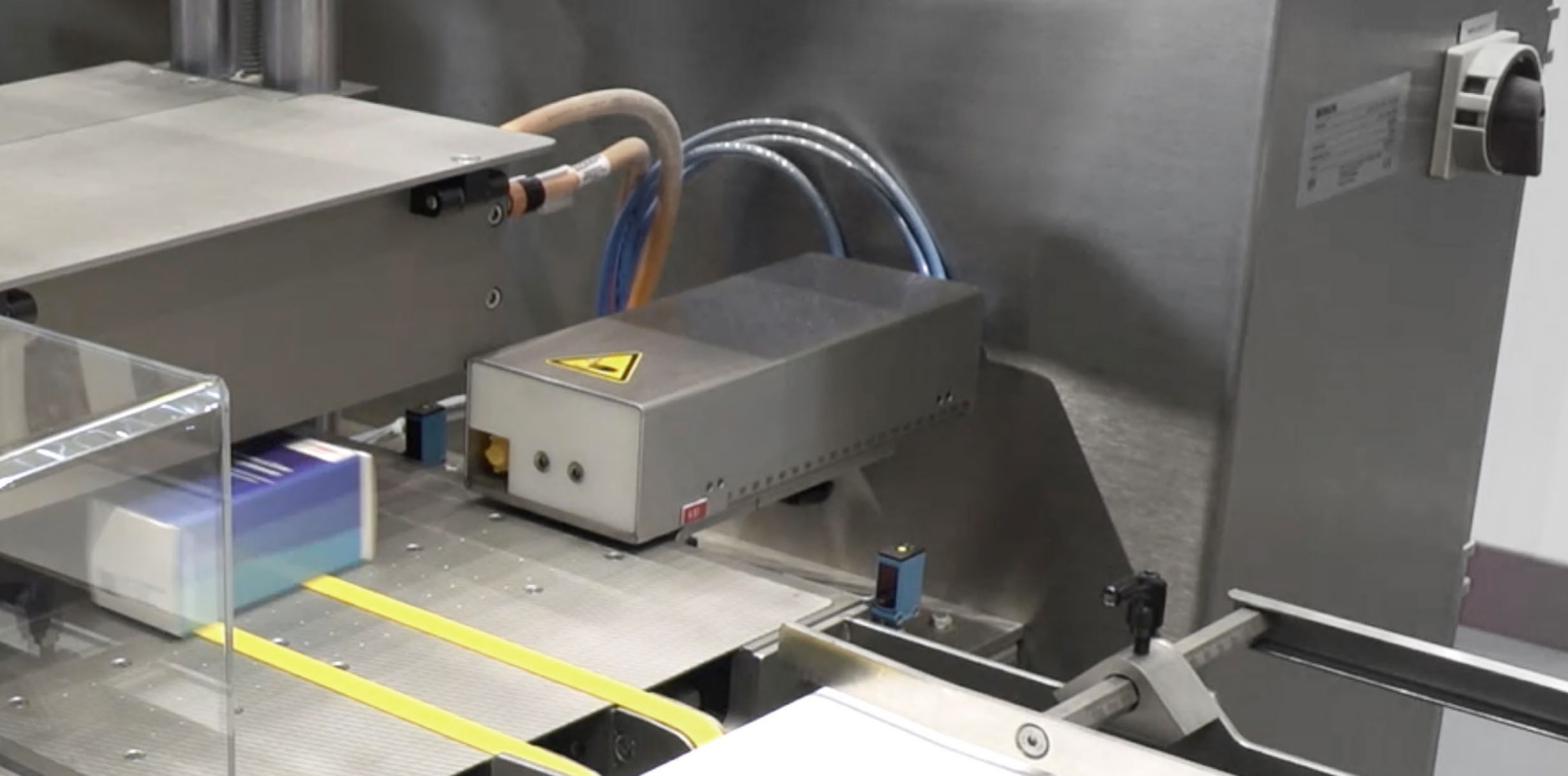
Fast, uncomplicated assembly saves the machine fitters time and money. However, long-term savings can only be realized if the actual performance can be improved. On the m600 oem and m610 oem, this is done by extending the connectivity by up to six printheads. Steven Marks comments, "As a result, we have not only increased flexibility in use, but are also able to provide the machine operator with a significantly extended buffer. This reduces set-up time when frequently changing printing jobs and increases plant availability."

For example, with a single controller, you can print up to 6 unique codes at once. Alternatively, you can print with up to 3 printhead groups, giving the user the choice of either double the production run-time between cartridge changes, or replacing empty ink cartridges without having to stop the line.

The cartridge authentication implemented with the m610, whereby the print cartridges are automatically recognized by the printer, is viewed by Jörg Willburger as a significant step towards Industry 4.0, and as a factor in facilitating further time and cost savings. "This definitely reduces our workload," remarks the project manager, "as we no longer need to do the set-up ourselves, since we have the ideal printing parameters through authentication directly from installation of the cartridge."

In addition to authentication, the chips installed in the cartridges provide feedback on the ink level and expiration date. Says Willburger, "This is another component that enables us, in the interests of our customers, to help ensure a printing process free from interruption. In addition, the new Wolke oem models offer our customers the opportunity to further reduce their printing costs by optimizing their ink consumption."

A milestone in the transition to this new generation of printers, in particular for globally active customers such as Bosch, is the significant extension of the full typeface area. Steven Marks comments, "During the period of time that saw the development of the m600 advanced, the use of thermal inkjet printers in packaging systems was still a predominately regional business. This has changed. Bosch, for example, now sells these types of systems worldwide. To be precise, the oem advanced customer already had the option of installing other scripts, such as Cyrillic, Chinese or Korean characters, but this was associated with corresponding time and effort. Unicode TrueType® fonts are now integrated into the m600 and m610, making it easy to deploy the systems worldwide."



As much flexibility as possible. This is also valid for potential adjustments for use by the customer. Jörg Willburger clarifies,

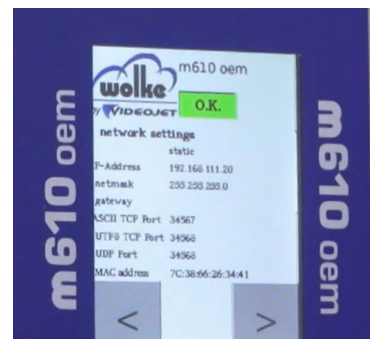
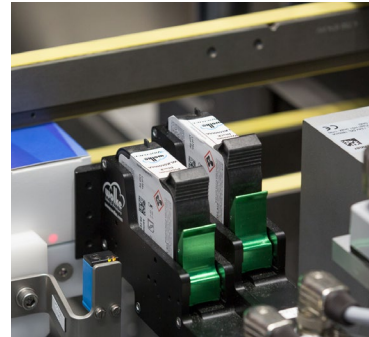
“Whenever there are specific additional requirements that may not be met by default, we can count on the support, technical expertise, and speed of response of the Wolke service team. Our experience has been that everything that was technically feasible was implemented without any problems.”

Greater flexibility indeed, but not at the expense of security. Marks explains,

“In the majority of cases, plant owners do not want the operators to make changes to the system. The advanced model is still designed so that system changes can be input directly via the display interface. This has potential danger. For example, operating errors may occur as a result of unintentional contact, with potentially serious consequences for the printing process. We have put a stop to this with the newer oem version. Changes in the system are only possible through a connected PC.”

More flexibility, more power, more security. In addition to these technical improvements, increased flexibility, and savings in cost and effort, the service factor provided by Wolke by Videojet remains one of the trump cards for Bosch. Jörg Willburger clarifies,

“No matter what technical questions we come up with, customer service always has the appropriate answer. Whether training measures or spare parts supply worldwide, we receive first-class service – exactly as we expect it from our business partners.”



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