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by **VIDEOJET**

Thermal Inkjet
Medreich PLC Case Study

Indian medicine manufacturer Medreich PLC improves production and quality with coding solutions from Videojet

Medreich PLC is a fully integrated pharmaceutical company that manufactures and markets a range of pharmaceutical preparations in various dosage forms catering to diverse therapeutic categories, across various geographies.

With a client base spread across the world, Medreich PLC is involved in the manufacturing and packing of formulations for various multinational blue chip companies. Catering for such large pharmaceutical brands demands the in-house capability to comply with legislation in regulated markets across the globe.

The company's UK manufacturing site, based in Feltham, Greater London, is one of eight sites, all of which are built to comply with standards stipulated by international regulatory bodies, such as the UK Medicines and Healthcare products Regulatory Agency (MHRA). This validation ensures they have the required certifications, accreditations and cGMP compliance to meet market and customer demands.

With more than 2,500 employees worldwide, Medreich Group has built a reputation for raising the bar on product quality while maintaining high standards of service levels.

Medreich PLC, UK, predominantly specializes in thermoform blister packing of over-the-counter (OTC) and prescription drugs used for pain relief and other physical and mental health conditions.

It is critical for pharmaceutical manufacturers to apply expiration and batch code information that can be read by the human eye as well as machine readable to verify each code with a camera vision system. This system is designed to check that the packs are coded accurately in order to help protect patient safety, and also provides the ability to trace the packs throughout the product supply chain.

The healthcare industry has been severely affected by the trade of counterfeit or illicit drugs. This can threaten government finances, but more importantly, presents a worldwide public health issue. It is estimated that ten percent of the world's medicines are counterfeit, costing millions and risking lives. To address this, governing bodies around the world are enforcing serialization and traceability legislation, which is driving huge change in the way manufacturers are required to code and mark their products and packaging.

The company currently runs one eight-hour shift per day with production between 60 to 175 packs per minute depending on pack size. However, due to a company decision to expand into the packing of more controlled drugs, Medreich PLC required a coding solution that offered more capability to increase throughput for larger and faster production runs. The company required a batch and expiration code to be applied once per blister pack prior to the pack's heat sealing process, which means that the code must be able to withstand heating of up to 220° C.

Jeff Wysocki, Operations and Facilities Manager explains "We typically prefer to print our codes prior to the heat sealing lidding process but due to the intense heat, we have experienced some challenges with ink adhesion and a tendency for the ink to lift. Obviously we cannot afford to have a code that is illegible, so finding a solution that was reliable in both the hardware and ink was critical."

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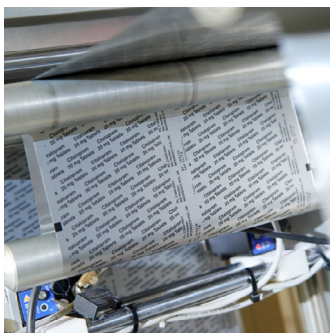
Working through Travtec, Videojet UK's exclusive partner for pharma integration projects, Medreich PLC was able to find the coding and marking hardware that met their needs for quality and consistency as well as achieving the ideal ink adhesion and full system integration with vision, reject and handling.

Travtec suggested the Wolke m600 advanced thermal inkjet (TIJ) solution from Videojet as they are recognized in the pharma industry for delivering low cost of ownership and low maintenance while providing the print quality and speed needed to mark each blister pack within a typical machine cycle. The Travtec solution with Wolke m600 TIJ printer is fully integrated using a Lixis PVS vision and control system that sends, controls and checks all printed data to help ensure that unacceptable products can be automatically rejected from the production process.

Since acquiring the Wolke portfolio of TIJ products in 2009, Videojet has invested heavily in developing its range of Wolke thermal inks, helping ensure that these inks can confidently meet the needs for virtually any pharma application. The latest Flex Solvent ink has opened up new possibilities for Medreich PLC as they can now use the TIJ solution for marking the non-porous blister foils, which was sometimes a challenge with previous inks.

Jake Barnes, Technical Sales Manager at Travtec explains, "the blister application at Medreich PLC is perfect for the m600 with Flex Solvent as the adhesion is superior to anything else comparable on the market and we've managed to achieve a much better contrast code for machine readability."

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> **Paul Watkins, Operator Technician**
> **Medreich PLC**
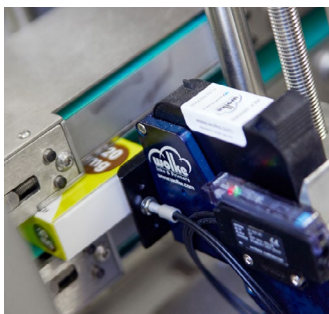
Like many pharma manufacturers and contract packers, Medreich PLC is not only meeting the current industry regulations, but is also preparing for the approaching deadlines of future legislation. In light of the 2019 deadline for the EU Falsified Medicines Directive, Medreich PLC is already discussing additional projects for serialization compliance as well as anticipating other potential changes in what the market may demand.

Coding and marking requirements on Medreich PLC blister pack applications have changed, since some European customers are already moving towards single dose marking of each blister pack pocket. Marking every pocket is becoming increasingly common in drugs that are dispensed in hospitals or skilled nursing facilities as it makes it possible to cut or separate drugs during dispensing without losing coding information for traceability. This increasingly popular practice creates a challenge in that all of the individual pockets must be marked with a batch and expiration within the cycle time of the packaging line.

Marking across the blister web to print multiple codes in a single pass can be achieved with Wolke TIJ printers, as they have the ability to print with four heads simultaneously. In addition, the Wolke m600 TIJ printers offer a range of features that make it especially suitable for Track and Trace applications. These features include powerful new processing hardware, a large data buffer for serialized record management, remote commands and data handling protocols, Unicode TrueType® fonts for global projects and innovative asynchronous communications capabilities. Its print speed of 300 meters per minute (784 feet per minute) is suitable for most applications that require marking individual blister packs and helps ensure that customers can maintain their line speeds and production volumes without compromising code quality.

Jeff Wysocki continues "We've always known of the Wolke m600 thermal inkjet brand and were satisfied that this would be a reliable solution. They are easy to integrate with most pharma packaging lines such as the Marchesini and CAM blister machine, as well as carton packaging lines. These thermal inkjet printers are also clean and easy to maintain. I'm confident that when implementing our phase two production line for marking single dose blisters or implementing serialization, this will be the product to work with."

The Wolke m600 product range is designed specifically for pharmaceutical applications. This makes it an ideal solution for integration with other packaging line equipment, and simple to operate in conjunction with all major vision systems.

Paul Watkins, Operator Technician explains,

"The Wolke m600 is very easy to work with. It's fully integrated with the Lixis vision system, so the only interaction is replacing an ink cartridge when the interface tells me it's low. This advanced notification helps avoid unnecessary packs being rejected and scrapped due to low-contrast codes."

Videojet and Travtec have maintained a close working relationship with Medreich PLC for several years and look forward to continuing this support as the needs of the business and the industry change over the coming years, especially as new pharma legislation deadlines approach for serialization.

Jeff Wysocki concludes,

"We have always been happy with the service and support provided by the Videojet and Travtec team; it's fast, reliable and friendly, but more importantly, they understand our business and deliver a professional and well-executed project."

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