



✦ Laser Marking Systems  
DataLase™  
Case study

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## Videojet and DataLase cooperate to successfully promote innovative product label solutions

**Companies must keep a close eye on the overall market if they want to rely not only on their current competence and proven expertise, but also successfully produce and sell in the future. Besides optimizing proven procedures, it is critical to keep track of the development of alternative technologies. Decisive effects can be achieved by changing just a few parameters – whether by increasing technical capacities, boosting quality or substantially reducing investment or process costs.**



Among product labeling alternatives, the DataLase™ printing process has become increasingly attractive compared to conventional labeling procedures. This process was developed by the eponymous British company and uses color change to make laser marks visible.

DataLase has been in use for quite awhile for packaging processes in the pharmaceutical industry. However, due to relatively high investment costs, it only played a marginal role in other sectors until recently. Over the last few years, these conditions have changed, mainly because of lower purchase prices of laser systems for both industrial labeling solutions and the special laser-sensitive pigment coatings needed for DataLase applications. The procedure has thus become far more attractive, especially in the food and consumer goods sectors.

The differences between DataLase and conventional labeling procedures are considerable. Under certain conditions, companies with huge labeling volumes may significantly benefit from using the DataLase process – particularly with a view to the future.

DataLase technology helps eliminate consumables from production environments by producing a color change reaction in laser reactive ink that is applied to the substrate (eg. corrugated boxes or primary labels), using conventional printing methods by the box/label supplier. Highly efficient and reliable laser systems, such as the Videojet 3140, 3340 or 3640, can be used with DataLase to create permanent high-contrast black codes and bar codes that are an alternative to print and apply labels, or inkjet coding onto primary as well as secondary packaging.

**“DataLase provides excellent high-resolution quality. As the label is applied at a very late stage of the production process, the risk of smudges in the further process is significantly lower than in competitive procedures.”**

Robert Zimmermann  
Head of Business Development & GSA, Videojet Germany

**DataLase-based solutions help enable brand owners to standardize their coding equipment with laser technology, thus reducing any training/servicing requirements necessary with having multiple technologies on the same production line.**



**Mark Naples**  
Chief Sales and Marketing Officer  
DataLase

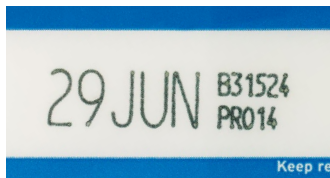
**For example, a production line typically utilizing continuous inkjet (CIJ) for primary coding (expiry/lot) and a label print and apply (LPA) system on corrugate boxes (shipping labels/bar codes) can have the same Videojet laser, combined with DataLase technology, installed at each coding station to do both. This not only makes production lines more efficient, but with no consumables (e.g. labels or ink) required in production areas, it makes them cleaner with fewer maintenance requirements.**

Of course, cooperation is required to successfully advance the procedure and to provide customers with an optimally coordinated overall system. With this in mind, DataLase and Videojet promote their development, marketing and sales collaboration, with the goal of realizing and successfully marketing new and innovative complete solutions with product codes or specific encoding applications.

“The good thing about this method,” says Mark Naples, Chief Sales and Marketing Officer at DataLase, “is that end customers can benefit from our cooperation. For them, our cooperation means improved efficiency, reduced material input, less service and maintenance costs, as well as lower operating costs.”

In contrast to conventional printing methods, DataLase does not pre-produce finished printed labels. Instead, bar codes, alphanumeric messages or logos are applied as part of the actual packaging process. The first advantage of this is both a higher degree of individualization and the surprisingly high speed at which these individualization processes can be implemented. Printing with DataLase means that customers can respond much quicker to changes in printing variables and templates for graphics, bar codes or alphanumeric texts — without slowing down their print processes or facing higher direct or indirect costs. In this way, the increasingly high demands placed on individualized packaging in a growing number of sectors are being met.

Given certain conditions and environmental factors, the DataLase method provides users with decisive advantages over the still dominant inkjet or thermal procedures. “A specific strength of DataLase applications is the substantial increase of flexibility and efficiency along inline packaging production processes,” Mark Naples explains. “Besides its high quality and reliability, the procedure has gained additional importance due to growing demands in the area of Corporate and Social Responsibility (CSR).”



**Laser marking on sleeve using DataLase™**



**Robert Zimmermann**  
Head of Business Development  
& GSA, Videojet Germany

Accordingly, DataLase procedures help brand owners comply with the objectives of CSR measures to minimize the impact of environmental factors along the entire value added chain as much as possible. The elimination of consumables from production environments means fewer deliveries and fewer vehicles on the road, thus reducing CO<sub>2</sub> emissions and environmental impact. Additionally, there are no special disposal considerations for empty ink cartridges or label waste. This means less inventory control, safer working environments, and optimized supply chain management.

Robert Zimmermann, Head of Business Development & GSA (global strategic accounts) for Videojet Technologies GmbH, further elaborates: "No matter whether they use QR codes, text or image templates, customers remain in full control and enjoy a wide degree of flexibility in deciding what information they want to print onto their packaging."

Given the suitability of the procedure, Zimmermann says, there are further benefits: "DataLase provides excellent high-resolution quality. As the label is applied at a very late stage of the production process, the risk of smudges in the further process is significantly lower than in competitive procedures."

Aside from the existing technical requirements, Zimmermann considers the expected return on investment as the decisive factor for using the technology: "In our experience, the attractiveness of using DataLase increases with the volume of packaging units a company produces per year."

This experience is based on economic considerations that monitor investment (especially the use of new laser systems) and ongoing material costs (special laser inks, in particular) over medium to long-term periods. "Both in theory and in actual practice, it turns out that for high volumes of packaging, the use of laser printers in connection with DataLase technology increasingly pays off in the course of some years," says Zimmermann. In his eyes, the high availability of the laser systems, as well as their relatively low maintenance and follow-up costs, are the crucial factors in this regard. For instance, the laser systems employed have the advantage of being much simpler, thus reducing maintenance costs and increasing availability: "Manufacturers are facing the first significant maintenance operations only when replacing the laser tubes after a period of eight to nine years after initial commissioning."

Another advantage of carrying out the individualization at such a late stage during the production process is the considerably lower storage and logistics costs, both internal and external, resulting from the significant reduction of packaging variants. More efficient processes result in substantial process cost savings.

In spite of all the benefits offered in certain applications, DataLase is not suitable for use with all inline applications. Although Videojet laser systems are equipped for DataLase technology in stationary as well as mobile mode, the efficiency of DataLase applications decreases where the combination of the quantity of information to be printed and the required inline speed exceeds a certain limit. Exclusion criteria may occur, for example, where target speeds cannot be reached or labeling is not feasible in standstill mode. We look forward to discussing what benefits a particular DataLase solution holds in store for customers.

Accordingly, Zimmermann considers the process “one of a number of technologies to be used as a printing process,” adding, “In any case, it is one that promises strong growth in the future.”

**Having DataLase-based solutions as part of the Videojet portfolio means we can help specify the optimal coding solution for your application, whether it be laser, labeling, or inkjet.**

**Contact us and we can work with you to examine the options available and help select one that is best-suited for your unique needs.**



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