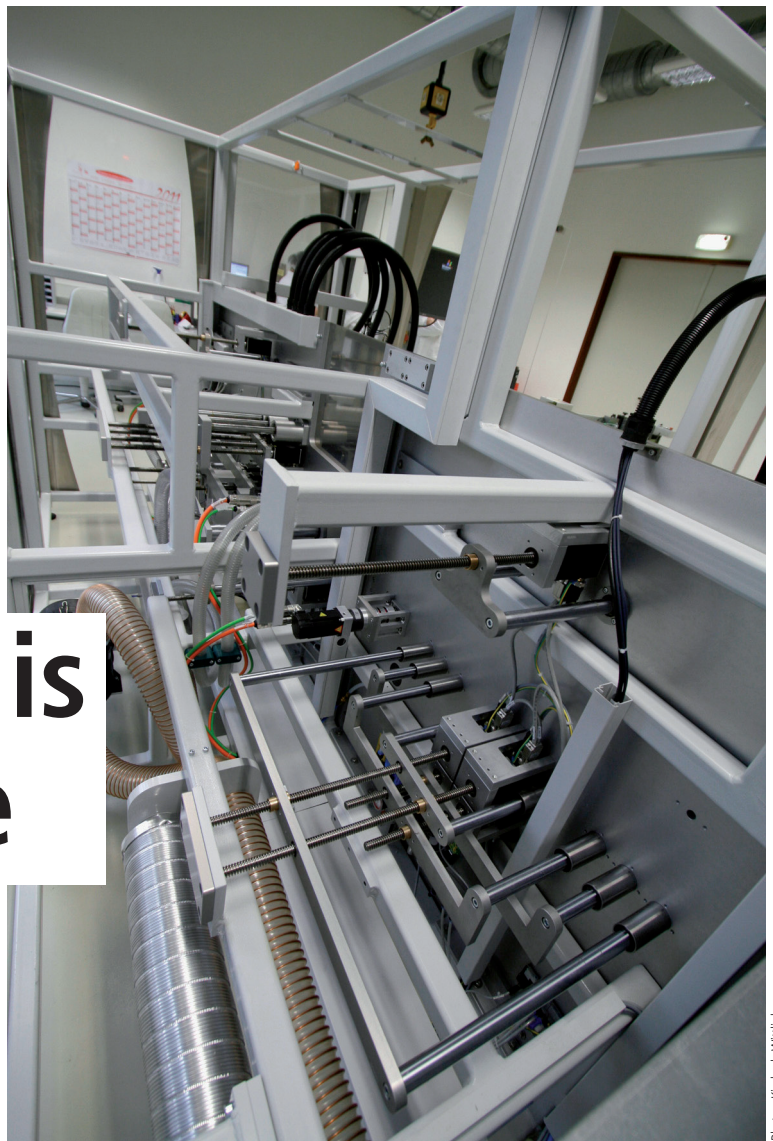


The back view shows the balcony design and the automated format adjustment.



Photos: Kimberly Wittlieb

The solution is called offline

Meda Manufacturing investing in efficient identification system

At its German, plant, pharmaceuticals contract manufacturer Meda Manufacturing recently installed the first KPM-200 printing machine from Koch Pac-Systeme, the specialist for blister and final packaging systems from the German state of Baden-Württemberg who has entered this new business sector.

■ As a renowned contract manufacturer both for companies within its own group as well as for other domestic and international companies in the pharmaceutical industry, Meda Manufacturing GmbH is facing ever more complex tasks in the process of fulfilling the specific requirements with regard to identifying packaging. In international business in particular, there have been specific legal changes recently, such as for the datamatrix code.

Turkey and France, for example, recently decided to introduce a 2D code on folding cartons. In addition, on February 16 of this year, the European Parliament approved a Directive that had previously been negotiated between the Commission, Council and Parliament for preventing the forging

of medications. After thorough discussions in the corresponding associations and an appropriate transition period, binding legislation will probably not be passed before 2015. If the 2D code is proscribed uniformly, the EU assumes there will be an investment need of between eight and ten billion Euros for the entire pharmaceutical industry.

A flexible space saver

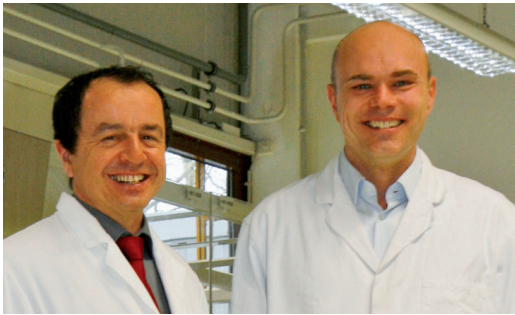
Against this backdrop, and in order to be able to master the increasing requirements at the present already, the Meda subsidiary located in Köln-Mülheim/Germany has recently purchased a KPM 200 identification machine from Koch Pac-Systeme GmbH, based in Pfalzgrafeweiler, Germany, that will be used for thermal inkjet printing of

folding boxes. The parent Meda AB, headquartered in Solna, Sweden, has approximately 2,700 employees worldwide in about 50 countries.

As an alternative during initial planning, an inline system had been discussed for the packaging lines. This option was, however, abandoned for a variety of rea-



**Koch Pac-Systeme
at interpack:
Hall 11,
stand C04/D03**



Mathias Schäfer (right), process technology manager at Meda Manufacturing GmbH, and Karl Eberle, regional sales manager at Koch Pac-Systeme GmbH.

sions. It would not only have required a considerably higher level of investment, but also additional space, and it would have resulted in a loss of efficiency in the nine primary packaging lines.

The solution is an offline configuration. The KPM-200 (KPM stands for Koch Print Machine), which takes up only 5,800 mm × 1,700 mm × 2,200 mm (L × B × H), was finally commissioned in December of 2010 and represents the first system of its kind. It is housed in a separate room at Meda, and the folding boxes to be identified are delivered on pallets, as needed.

200 products/min

In addition to its low footprint, its high level of flexibility and coding variability were probably important criteria when the purchasing decision was made. The basic version is adaptable due to the fact that the identification system and the image and/or data processing application can be freely selected. The model installed in Cologne has universal equipment with numerous options, as becomes obvious when looking at the individual processing sections and/or components in detail.

One of the most essential technical features of the system, which is GPM-compatible and designed in the balcony style, is

– in addition to its high transport speed of up to 52 m/min and the resulting remarkable output of 200 products/minute for a standard pitch of 260 mm – the time and cost saving automatic format adjustment. This is a special, proprietary development from the manufacturer.

Meda uses the convenient adjustment options over a range from 45 mm × 60 mm to a maximum of 200 mm × 400 mm (L × W). The fact that the KPM-200 can completely cover the corresponding coding needs of all lines allows utilizing the machine's high production speed to the max.

Double-sided printing possible

The folding cartons are fed in by a length-adjustable horizontal loader, separated by a friction feeder, and exactly positioned in an alignment area using a cam conveyor. This is followed by a product inspection performed by a camera that queries for the pharma code. A second camera below the conveyor can, if necessary, scan the code from the other side.

By means of a vacuum top conveyor belt and a three-lane, width-adjustable vacuum transport conveyor belt, the folding boxes are moved to the printing section, the core of the system. Meda uses a thermal



The core of the system is the printing section with four movable or cascading print heads and printing inspection via camera.

The KPM-200 offline identification machine including the product erecting and grouping systems.



inkjet unit from APS Alternative Printing Services, based in Herrenberg, Germany, as its identification system.

The system, which uses HP cartridges, has four printheads that are movable and can thus be arranged in a cascading format. It can also handle double-sided identification, as well as transverse printing across the width of the product for up to two inches.

Double-sided printing performed in two runs allows resolving the layout problems arising from the additional identification requirements, in particular for small folding cartons. Here, serializing elements can be added on both sides, providing maximum flexibility. The code imprinted during the first run is being scanned here by a third camera mounted below the conveyor belt.

The integrity of the serial numbers included in the code is inspected by an image

Before the printing process, the pharma code is verified by means of camera inspection.



and data processing system from Quali Vision, a company based in Oberrieden, Switzerland, and printed on the other side as human-readable text. For technical validation, an additional camera also placed below the conveyor belt finally compares the code serial number to that of the human-readable text.

Printing and image processing system selectable

In addition, the image processing system, which can also come from a different supplier at customer's request, checks whether the print quality corresponds to the required grading. The Cologne pharmaceuticals contract manufacturer achieves a grading of Levels A and B, thanks to the optimum product control and the thermal inkjet printer; this process safely complies with all current requirements.

The user may also freely select the identification system. Alternate inkjet and thermal transfer printers, drop-on-demand and laser identification systems, as well as labelers may also be integrated. Accordingly, any imaginable code, text, number or logo can be realized.

Products that do not meet the quality criteria are removed via a reject line. A perpendicular discharge conveyor directs all correctly imprinted folding cartons to a product erecting and grouping system sup-

plied by Tünkers Maschinenbau GmbH, from Ratingen, Germany.

Positive practical experiences

Koch Pac-Systeme GmbH, which is part of the Uhlmann Group, and specializes in blister machines, carton erectors and other final packaging, began manufacturing offline identification machines at its site in the South-western German state of Baden-Wuerttemberg, opening up a new business sector. In addition to folding cartons, they can also be used to code other cut carton and film sections, as well as blister, phone and check cards.

Mathias Schäfer, process technology manager at Meda Manufacturing GmbH, is very happy with the work results of the KPM-200, based on the practical experience so far. He said that initial production orders ran without problems, and that the stand-alone configuration ran, as expected, at considerably higher efficiency.

In addition, he praised the pleasant and professional atmosphere in which the project was handled, allowing creative and innovative solutions to be found. He thought that the offline identification machine, which will also be shown at interpack, is a good basis for responding flexibly to all requirement models being currently discussed.

Bernd Neumann ■

Advantage

Benefits of the offline solution:

- Smaller footprint.
- Prevents loss of efficiency at the nine primary packaging lines.
- Allows selecting the ID system and the image and/or data processing application freely.

Output:

- Up to 200 products/minute.

ID system:

- Thermal inkjet unit from APS.

Special feature:

- With double-sided printing in two runs, the layout problems from additional ID needs of small folding cartons in particular can be solved.