

FROM THREE SHIFTS TO TWO WITH THE MBO COBO-STACK

- A Case Study from MBO Post Press Solutions





Hannes Sandler, Managing Director of Johann Sandler GesmbH & Co KG

Johannes Sandler is a realist. The Corona crisis will be with us for a while yet, that much the Managing Director of Austrian printing firm Johann Sandler GesmbH & Co KG based in Marbach an der Donau is sure of. Another year, he estimates. Then...yes, then things can get going again.

And until then? Until then we just carry on. Sticking his head in the sand is certainly not Sandler's style. Over the past few months, the printing company with its 70 permanent employees has put together an investment package of over thirteen million euros. Among other things, investments were made into sustainability: The fleet was partially replaced with nine electric vehicles, and the required fast charging stations (up to 150 kW) will in future be supplied with electricity from their in-house photovoltaic system. A further focus was production technology. Two new presses were on the cards. And very importantly: massive investments were made in print finishing.

Investment despite Corona

Corona and the associated measures have been quite a burden for the printing firm. "We are very active in the tourism industry, printing a lot for the non-food retail trade, and for the furniture and automotive industries," reports Hannes Sandler. "From one day to the next, virtually everything was cancelled." March 2020 was a record month, and April was the worst month in the last 20 years. From April to June, the company lost around 60 percent of sales.



Nevertheless, Sandler persisted with his investment project. "We have a very solid financial foundation," says Sandler, explaining the decision. "In the last financial year we had an equity ratio of over 65 percent. Our response was to say: We believe in the industry. We believe that things will continue moving forward and we will invest."

The investments were above all about keeping pace with development and not suddenly halting investment; after all, the performance of the printing firm is based not least on all processes working together seamlessly without friction losses. It's all about efficiency or, to put it bluntly, not wasting any time anywhere and ensuring that personnel are deployed wisely.

After all, Sandler is one of Austria's five largest sheetfed offset printing firms and specialises in large runs. Three long turning machines from Heidelberg carry out print operations in Marbach, all equipped with CutStar web feeders and the corresponding logistics. The output of these machines is folded into signatures and processed into brochures, magazines and catalogues in high volumes on two large saddlestitchers as well as a high-performance perfect binder from Müller Martini.

"We compared the two options," says Sandler. "A slower machine simply costs us more in terms of personnel and more overtime when compared to a more productive machine and a more stable production process." It's about much more than just the initial cost."

The head of the company saw a need for investment in the folding area in particular. If saddlestitchers and perfect binders are to be utilised efficiently, it's important that folding

doesn't become the bottleneck. In addition, there is the familiar problem of a shortage of skilled workers which Sandler is also struggling with.

Before now, folding operations were being carried out in three shifts, each with two employees per shift. "But if you run three shifts, you sometimes have only helpers available on the machine because there is a lack of trained personnel," says Hannes Sandler. I would love to be able to hire multiple bookbinders, but they simply aren't out there." Sandler sees the solution in automation: "We asked ourselves: What can we do to make the profession of bookbinder more attractive again? Spending eight hours transporting parcels from the delivery to the pallet is not bookbinding work." Nevertheless, you need someone who can tap into the potential of the machine and ensure quality is maintained. "The only option I can see is to outsource these heavy, monotonous jobs to a machine."

From three shifts to two



Originally, the company had planned to visit Drupa and put together its "shopping list" there. But back at the end of February 2020, it was clear to Sandler that it would not be possible for Drupa to take place in its normal format – which is why the company boss organised his own private Drupa.

During a 14-day tour, the company canvassed its most important suppliers. They

came back with the decision to invest in two K8RS combi folding machines from MBO including MBO KT90 curved tables – and two CoBo-Stack stacking robots which were installed last autumn. The upshot: since then Sandler has saved one shift for folding and only needs one employee for both folding machines. As Sandler says, they are not even running at full speed. In fact, the K8RS machines achieve 275 m/min, or in other words, 18,000 sheets 16 pages of A4 per hour. "Currently, they are running constantly at over 10,000 sheets/h," Sandler reports. That is adequate for the moment and the process is incredibly stable.

Since then, 90 percent of what is processed on saddlestitchers and perfect binders has come from the MBO machines. "We have the great luxury of having a large number of folding machines and being able to align the machines according to the type of fold, similar to an

online printer," says Sandler. "This means we hardly ever need to carry out setup work any more. We fold 16 pages on the two MBOs 90 percent of the time." The two identical folding machines have a mirrored setup. Using the curved tables, the folded signatures are redirected in such a way that the two delivery systems and the two CoBo stacks are close to one another. As a result of this reduction in travel distances, one employee is now able to manage the operation of both folding machines simultaneously. Stacking is handled by the two Cobots. The bookbinder is responsible for operating the machine, quality control and the logistics surrounding the machine. Hannes Sandler emphasises this aspect in particular: "Bookbinders are enjoying the folding process again," he delights. Before that, folding was a rather thankless task which was turned on its head thanks to the CoBo-Stack. "Now people want to work on these machines again."

Hannes Sandler is also really pleased in other respects: "The advantage of the CoBo-Stack is that it is so incredibly flexible. It hardly takes up any more space than if an employee were standing there. And as it doesn't need a cage, you can intervene quickly at any time. It runs the full two shifts every day."

Automation as a philosophy

The two new folding machines and the two CoBo-Stacks have provided a tremendous upshift in productivity for Sandler. In addition, an important consideration for the company boss is ensuring reliable and consistent high quality. Work on the machines should also be as ergonomic and easy on the employees as possible. In this respect, the topic of automation has a high priority at Sandler and is more than simply a 'numbers exercise'. In practise it has more to do with company philosophy and is also reflected in the other equipment found at the printing firm.

For example, a latest generation Heidelberg printing press with autonomous printing has been in operation in the printing hall since November, and a second press with 14 units will be installed by summer. In addition to the new folding machines and the CoBo-Stacks, the latest round of investment also included a total of five automatic delivery systems from Palamides, some of which are used on the other folding machines and on the two saddlestitchers.

Sandler has been working in the cutting area for about two years with a total of two Polar Pace systems with rear table loading. For the area of paper drilling, an automatic Dürselen drilling machine has now been added with fully automated loading. An automatic insertion, assembly and packaging system from Hugo Beck is also installed, which can also process starch-based film and is equipped with an LED inkjet system.

Connectivity is an important topic for printing firms. However, according to Hannes Sandler, the company has yet to find a system that "covers everything". This is probably something that needs to be handled by an in-house programmer. Keep moving forward, that's the main thing!

About Johann Sandler GesmbH and Co KG

Johann Sandler is a full-scale printing/bookbinding firm in Marbach an der Donau, Austria. The family business was founded in 1982 and is now in the hands of the second generation under Hannes Sandler. Printing operations are carried out by 70 permanent employees across a production area of approx. 8,000 m², predominantly in the high-volume segment. Volumes in the millions are part of daily business operations, and an important market for Sandler is Germany. In addition to traditional commercial products such as magazines, catalogues and brochures, the company offers packaging and mailing facilities as well as a wide range of print finishes. In the printing hall, Sandler utilises three printing machines with a total of 32 printing and varnishing units, complete with roller feeders and logistics. The finishing facilities consist of eleven folding machines, two saddlestitchers, a perfect binder, three cutting lines, two folding box gluing machines, five punching machines, two mailing lines, two enveloping lines and special folding machines with 16 buckle plates. New additions include a fully automatic drilling rig and a packaging system that processes starch-based film.

50,000 robot arms

Collaborative robots such as the Cobo-Stack are on the rise in the industry. At the end of last year, the Danish company Universal Robots, which also supplies the technology for the MBO CoBo-Stack, shipped out 50,000 robot arms. According to Universal Robots, collaborative robotics in industrial automation is regarded as one of the fastest growing sectors with a projected annual growth rate of 30.37% by 2025. Universal Robots is one of the market leaders here. Universal Robots has pursued the goal from the outset of assisting small and medium-sized companies in automating tasks that they thought were too expensive or too complex, says Jürgen von Hollen, President of Universal Robots.

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