

## **Nobilia: Initial experiences with the powerTouch machine controller from the HOMAG Group**

### **Maximizing system utilization**

**Speed, efficiency and flexibility are key factors in batch size 1 production. Nobilia has been using the new generation of powerTouch machine controllers from the HOMAG Group since early 2014 — and can report very positive results. The powerTouch system offers many benefits, including the elimination of interface issues within a plant, reduction in training time for new employees, and direct generation of key performance figures for a particular machine directly from the controller.**

With revenues of EUR 923.4 million and 580,000 kitchens produced in 2013, Nobilia is an undisputed industry leader. However, in order to achieve equally impressive production figures, it needs a fast, flexible and efficient production system that can keep up with its annual rate of sales growth. "For Nobilia, it is hugely important to have and to maintain a high degree of machine utilization. We don't have a finished goods warehouse that we use to supply customers. Instead, we start production only once an order is received, in accordance with the delivery schedule," explains Martin Henkenjohann, Technical Director at Nobilia for the last four years and responsible for the plants at Kaunitz and Verl-Sürenheide, Germany. "Individual parts are manufactured at a very early stage in the process. We have to be able to complete the process on schedule so that the downstream logistics chain can run smoothly right through to the loading stage."

One step in this direction has been the purchase of two new and identical systems from the HOMAG Group for manufacturing customized fronts in both Nobilia plants. The systems include the new power**Touch** machine controller.

"Despite the batch size 1 production process, it is not a particularly big system. However, it has a high degree of internal complexity and is one of the first in this form to be delivered," explains Stefan Rose, Sales Director at HOMAG. Lars Eberlei, Production and Plant Planner at Nobilia and a specialist in edging for body and front areas, adds: "This system clearly demonstrates the strengths of **powerTouch**. It enables operation of a whole system with multiple machine components using a single, standardized control system. In this system, customized front parts that have previously been edged on three sides are automatically cut to the required fixed dimension and an edge is applied using either a laser or PUR glue. We actually use two different colors of PUR adhesive, and we stock 96 different edges using the magazine. Both the 96-slot magazine and the system infeed have their own **powerTouch** terminals which communicate with each other and control the other HOMAG and HOMAG Automation system components."

The HOMAG Group first launched **powerTouch** on the market at LIGNA 2013. For Nobilia, this was the solution to a long-standing problem: "In the past, we always had issues with interfaces when interlinking systems – whether using parts from the HOMAG Group or machines from other manufacturers. The aim was always to achieve a clean control system, despite the diverse range of user interfaces. If interfaces are not specified precisely, the data transmission process does not work correctly and errors occur," explains Henkenjohann. With their requirement of achieving a standardized control system across the Group, Nobilia was certainly a customer that contributed to the development of **powerTouch**.

"With **powerTouch**, we really have been able to elevate all of our subsidiaries to the same level. Until now, it hasn't been possible for all subsidiaries to be on the same level in terms of hardware and software," says Rose.

It wasn't just the simplified system controller that impressed Nobilia. "We had a specific requirement for general controls — a computer structure that actually

has to be stored and includes specific network and security technology in order to operate with proprietary Nobilia plant data. This problem has now been solved too. It is now much easier for our IT department to fully install a system, and internal maintenance has also been simplified," reports Eberlei.

In addition to the system controller, the issue of data analysis is crucial:

"Standardized machine monitoring and reporting (MMR) enables us to analyze the system in even more detail. We are able to detect problems at a very early stage and implement a targeted response based on the pure data, regardless of whether an employee enters specific error codes in the event of malfunctions. Until now, we haven't been able to do that in this way," explains Henkenjohann.

"The data that we can now generate directly from the control system provides us with a second level to our internal data recording system, which requires a lot fewer data transmissions. That means we get key performance figures that are more transparent and can be compared. In the past, we might not have been able to trace the error even ten minutes after the actual malfunction," says Eberlei. The company's ability to influence areas that require improvement—and hence its machine efficiency—has increased enormously.

"The power**Touch** system also prevents the control areas from increasingly resembling an aircraft cockpit with a large number of screens. If edge inspection, surface checks, individual control of units and so on can be operated from a single interface, the employee has a complete overview of the status of a machine or system at one workstation. We benefit in many ways, from the speed of error detection, shorter setup times, and ultimately greater machine availability," explains Henkenjohann.

What's more, the training time for employees on machines with power**Touch** is accelerated. The high level of standardization means that they can be deployed on different machines. "In the Kaunitz plant and the system in Verl-Sürenheide, it is mainly young employees who are working with the new systems.

power**Touch** has certain parallels with the way modern smartphones are

operated, so it is very easy for our employees to familiarize themselves with the user interface. Program levels were previously embedded in substructures that were difficult to access, but this has now changed. Many things can be detected more quickly and accessed via quick openers. For example, if dimensions need to be entered, a number pad opens and the data can be typed in directly on the screen. Previously, this required a keyboard. Although we still spend the same length of time on training, familiarization time has been reduced, and the employees now have the opportunity to learn about topics that go slightly deeper into the structure of the machine or the whole system, like maintenance schedules. The machines that are already installed are not enormous systems that would fill a whole hall. But despite their complexity, we can definitely say we were able to achieve very good performance values on both systems a short time after installing them, and we have been able to maintain these values ever since," says Eberlei.

For Henkenjohann, **powerTouch** is also a module that represents a step towards Industry 4.0: "Of course, there is still a long way to go, when we consider areas such as the cloud and data security. But in terms of the internal data network structure, we have already made a lot of progress. Our systems are directly connected to the design programs, and data is automatically generated from the CAD data by bar code. This is what enables us to perform batch size 1 production at any point in parts production and with flexibility in both plants. Standardized control systems that are monitored from the office make it easier for us to continue down this path."

The next **powerTouch** system—with a coordinated environment including inspection systems, robotic stacking and suction device—has already been ordered for installation over the new year period 2014/2015. Some 11,000 different models are currently being produced in the Kaunitz plant II alone, and even more in plant I in Verl-Sürenheide. The Kaunitz plant currently covers an area of 120,000 square meters, and with construction of new halls already underway, this will soon reach 140,000. It has already overtaken plant 1 in this

regard — and its continual increase in production up to a full capacity of 18,000 models means it is also set to overtake plant I in terms of completed orders.



Nobilia is home to the first complex system to use the power**Touch** controller from the HOMAG Group. The machine infeed and the edge magazine each have operating terminals that communicate with each other.



Right Picture: Stefan Rose, Sales Director at the HOMAG Group, and Martin Henkenjohann, Technical Director at Nobilia (from left).



Lars Eberlei is Production and Plant Planner and, together with six other colleagues, manages industrialization of the kitchen specialist's production facilities. Their aim is to achieve the highest possible degree of automation at maximum machine efficiency. Top right: Delivery-to-order of electronic devices.



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