

News Release

Painting on sugar

Hitachi PXR System at Nordzucker

Sugar in all its uses is a perennial favourite. Even if the discussions about sugar in our diet have been controversial at times, there is no question about the success of the Hitachi continuous Inkjet in Nordzucker's production.

"The identification of our products is a sensitive interface between production and customer. This is where we wanted 100 percent reliability," describes Dieter Gerold, Production Manager, his interest in the use of the PXR inkjet printers from Hitachi in the packaging lines at the plant in Uelzen (Germany). A number of criteria were important in the decision to make this investment. But "price alone is not everything", emphasizes the Production Manager. "Fast service a short response times" have made the partnership with Hitachi's exclusive representative, ac codiergeräte GmbH in Würzburg (Germany), perfect.

We tend to take sugar for granted in our lives. We owe this to a development which started more than 200 years ago with studies on the sugar content in beets. Today, approx. 26 percent of global sugar production comes from beets. Nordzucker AG in Braunschweig (Germany) is, according to their information, one of the leading European manufactures of sugar; they have 12 plants throughout Europe. According to Nordzucker, about 1, 2 million tonnes of sugar were produced on approx. 199 000 hectares. At the Uelzen plant, investments were made into identification technology from Hitachi for pouch systems and bagging. The reason for selection the continuous inkjet PRR series was the goal to increase productivity at the packaging lines by ensuring uninterrupted function. At the Uelzen site, depending on demand, 800 to 1200 tonnes are filled into various containers daily in 3 shifts. Identification technology is especially critical, given the production volumes and their varying requirements with regard to operating reliability, explains Gerold.

Core sugar business is the focus

More than 80 percent of the sugar processed is sold in bulk and large containers primarily to the food and beverage industries. Big bags and plastic sacks are the packaging and transportation solutions of choice. Annual volumes of approx. 35,000 tonnes are filled into containers holding 10, 25 kg or 50 kg sacks on fully automated bagging systems. A production volume of that order of magnitude requires a smooth production process. This is where the PXR series 4-line printer is used fed with print data centrally from the machine control unit. Data for identifying varieties and granulation is provided to the printer in large format for lateral printing. That large printing surfaces do not have to translate into high costs was first shown during advance calculation of operation costs, and has now been proved in actual operation. The calculation provided by ac codiergeräte reliably stated the savings potential in operating costs.

The appearance of the printing parameters is impacted by conveyor speed, material and environmental parameters. The Black standard ink used has been specified for use on the PE film of the bags. Not even the sugar dust in the surrounding

air affects the smooth production flow towards the downstream palletizer. The Hitachi controls its ink circuit reliably for the required target parameters and provides uniform quality while doing its job – identifying bags.

SweetFamily

With its SweetFamily brand, Nordzucker has been setting standards in European trade since fall of 2004. About 15 percent of the sugar produced finds its way to the customer via grocery chains and discounters in Germany. Modern product design, blue-and-white product series design was selected for the private brand packaging in order to trigger the correct signals at the point of sales. The identification which serves the purpose of tracking products on the blue background had to follow suit. Now, a Hitachi PXR 260 is being used for printing use-by date and batch numbers on sugar bags and pouches. Since black ink will barely stand out from the dark blue background, the specifications of the JPK 91, the yellow equivalent for standard ink, were selected from the offerings for the standard printer. This did not require any changes in equipment technology.

The crisp appearance of the coding says ac codiergeräte, is proof for optimum ink handling. Clean application without overspray is a quality standard the company expects from the Hitachi continuous inkjet, and which they would not want to miss from production anymore. The specification requirements for the purchase did not only list the perfect appearance of the identification on the product, but also a clear reduction in interruptions on the product lines. This is an area in which Hitachi has also been able to score points for to its reliability and fail-safe operation. "The operators had to be facilitated by logical menu navigation, "comments Gerold. The PXR series 14" colour touch-screen has made operation easier. The sugar experts and ac codiergeräte agree that shortly, the PXR will have an opportunity to demonstrate its qualities and advantages when the sugar cube line is optimized and overhead-printing is implemented for cardboard boxes.

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About Hitachi Europe Ltd.

Hitachi Europe Ltd., is a wholly owned subsidiary of Hitachi, Ltd., Japan. Headquartered in Maidenhead, UK, it has operations in 13 countries across Europe, the Middle East and Africa and employs approximately 550 people.

Hitachi Europe comprises of nine business areas: rail systems; power and industrial systems; information systems; digital media and consumer products; display products; industrial components and equipment; air conditioning and refrigeration systems; manufacturing systems; and procurement and sourcing. Hitachi Europe also has three Research and Development laboratories and a design centre. For more information about the company, please visit <http://www.hitachi.eu>

About Nordzucker AG

We are one of the leading sugar producers in Europe. Working together with our beet farmers we ensure that the inhabitants of Europe enjoy reliable and sustainable supplies of the important foodstuff sugar as well as other products – especially in the animal feed sector.

Nordzucker provides the food processing industry, retailers and end-users throughout Europe with a wide range of different sugar types and the associated services. We are also pursuing a committed course of expansion in the European sugar

<http://nordzucker.de>