

PRESS RELEASE

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The Oschatz concrete plant relies on robot technology

Forms, colours and surfaces become more and more modern; architecture turns increasingly diverse. At the same time, the capacities needed for building projects increase and the cost pressure is rising. The machine technology in precast concrete production must follow this trend. Modernisation is key in the Oschatz concrete plant.

The traditional company Betonwerk Oschatz has supplied building projects with demanding precast concrete elements for more than 25 years. The precast plant installed in 1995 has been modernised for the latest technology standards several times and received several rewards for this. "Robot technology increasingly changes our working methods. Manual processes are automated, which continually increases our plant productivity," explains Managing Director Birgit Zocher. They trust in plant-specialist Vollert as a know-how partner. The last project included a new vacuum turning unit, installed in the double-wall production in 2012. Modernisation of the shuttering area and the cleaning processes took place in 2018.

State-of-the-art machine technology, thought-through in all details

"Highly efficient robot technology has ensured high precision and clean, reliable processes since April," explains Markus Schenk, Senior Sales Manager at Vollert. The new SMART SET robot line takes over deshuttering fully automatically and is controlled by CAD/CAM, as well as plotting the contours for the element floor slabs and double walls to be produced. The shuttering profiles of many different lengths are subsequently positioned, and installation parts such as magnets for e-sockets are placed, at high speed and with great precision. Up to four magnets can be placed at the same time. State-of-the-art laser and camera systems monitor this process. A SMART STORE magazinging robot was newly installed as well. It takes care of interim storage of the shuttering profiles in the storage magazines, or puts them back to the supply route to the next shuttering process. "The new robot technology and automated processes enable us to feed 5-6 circulation pallets through this work area every hour," says Birgit Zocher. "The individual robots also have separate safety areas, so that work can continue even if one robot area has a fault." "This was a challenge in terms of space, since a work platform for reinforcement preparation is placed right on top of the area in some places in addition to the limited footprint. However, we have been able to find an optimal solution for this, summarises Markus Schenk.

A SMART CLEAN cleaning station was newly installed. The SMART SET deshuttering robot takes over the profiles and places them on a roller track, where they are supplied to the shutter cleaner. Cleaning takes place conventionally with disc and roll brushes. Subsequently, separating agent is applied by spraying nozzles in the integrated separating agent removal unit. A pallet cleaner clears the surface of adhering concrete residues and glue, with rotating roller brushes and a steel scraper unit. An integrated spray unit with rotation nozzles then automatically sprays the steel sheet and the side rails with separation agent, as soon as the pallet moves into the working area.

About Vollert Anlagenbau GmbH

With more than 370 built precast concrete plants, Vollert Anlagenbau GmbH has become worldwide one of the leaders in technology and innovation in the precast concrete industry since 1925. Vollert always offers its customers state-of-the-art technology, from simple start-up concepts to highly automated multifunctional plants and systems for large and structural concrete elements or prestressed concrete sleepers for tracks and rail networks.

The specialists provide manufacturers of construction materials, construction companies, and property developers with advice on the latest developments in precast concrete manufacturing technology and devise customized, turn-key plant and machine concepts, ranging from high-performance tilting stations and battery moulds for stationary production to automated circulation systems and special formwork, for example, for columns, beams, and prefabricated staircases.

Vollert's plant and machine solutions are deployed in more than 80 countries around the world and in Asia and South America the company's own subsidiaries strengthen in addition the sales activities. Vollert employs more than 300 people at its company headquarters in Weinsberg. www.vollert.de

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Image 1

The new SMART SET robot line takes care of deshuttering fully automatically and is CAD/CAM-controlled.



Image 2

The shuttering profiles are positioned and installation parts such as magnets for e-sockets are placed at high movement speeds.



Image 3

A SMART STORE magazining robot was newly installed as well. It takes care of interim storage of the shuttering profiles in the storage magazines.