

Wasa AG, 64293 Darmstadt, Germany

Further German premium manufacturer banks on glass-fibre reinforced solid plastic boards

In Schüttorf in the district of Grafschaft Bentheim, Lower Saxony, there is a concrete and precast plant that is intent on impressing not only through its sheer size, but also through top quality. The company has set itself no less of a goal than to develop into the premium manufacturer par excellence in the industry. That is the declared credo of Betonwerk Kortmann.

The company was founded in 1950 by Carl Kortmann, initially as a haulage and trading business. Concrete block products were delivered to the surrounding area with delivery vehicles. The production of concrete products began a few years later. Karl Kortmann, who is known for his pronounced talent for tin-

kering and his wealth of technical ideas, has been the second-generation head of the company since 1970. Five years ago his two sons Henning and Matthias joined their parents' company, which is thus now being led by the third generation.

With its company headquarters directly by the Schüttorf junction of the A30 and A31 motorways, the plant is situated in a geographically favourable location between Lower Saxony and North Rhine-Westphalia. Deliveries to the Ruhr area and up to the North Sea are just as easy to make as those to Amsterdam or Berlin. The company's own vehicle fleet allows it to react quickly and flexibly to its customers' delivery requests.



Board turner and cuber were supplied by the Allgäu-based mechanical engineering company KBH.



The block making machine is a Hess RH 1500 of the latest generation with board dimensions of 1,450 x 980 x 52 mm.



Elevator and lowerator with produced blocks on the Wasa Uniplast Ultra.

Production runs in three shifts, six days a week. The block making machine is a Hess RH 1500. In 2017, following a detailed weighing up of the production board types that were available on the market, the choice fell on the glass-fibre reinforced Wasa Uniplast Ultra®, which were delivered with the dimensions 1,450 x 980 x 52 mm. 6,000 of these solid plastic boards have been in successful operation ever since.

On the basis of the load data supplied by the customer, the Wasa technicians determined that a 50 mm-thick board would meet the requirements for the bending behaviour. As a family-owned company, Kortmann Beton takes corporate decisions for the long term. Therefore, in 2017, the two people responsible for investment decisions, Henning Kortmann (managing director) and Julian Krümpel (commercial manager) wanted to keep the option open of being able to regrind the boards after 12 to 15 years in use. For that reason the necessary board thickness was increased by two millimetres. With these 52 mm and thus the possibility of regrinding, a significant extension to the already long service lives of the production boards is possible.

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Fully automatic robot on the dry side for quality control



Jointless, flat surfaces of the Wasa solid plastic boards for top-quality block undersides

In keeping with its claim to be one of the best manufacturers of high-quality concrete products and a pioneer in its branch of industry, the tasks that Kortmann required of the various suppliers were accordingly sophisticated: For example, the task for KBH from Lachen in the Allgäu was to implement the transport of the Wasa Uniplast Ultra boards from the lowerator into the board stacker. A Kuka robot was then to make the production boards with the 1st choice blocks - i.e. those with no defects - available for sorting. In addition, the production boards with blocks to be sorted out due to defects were also to be fed to the robot. Kortmann Beton specified that the moving in and out of the production boards with the 1st choice blocks as well as those with products to be replaced should take place as far as possible with uninterrupted operation of the cuber. In addition, KBH was to install a cuber and a board turner.

As such, these tasks were no great challenge for the suppliers involved. It was much more the size of the hall with its extremely tight space that made creativity necessary.

As is now impressively visible, the tasks were all implemented to the customer's entire satisfaction. The conveyor on the dry side was implemented as a chain conveyor with a special rubber covering, for which every type of production board is thankful, as this is the gentlest type of transport imaginable. A lifting/lowering station was integrated into this conveyor on the dry side, this being designed to prevent as far as possible the board transport and the cuber from being negatively affected by the lifting out and lowering of the production boards.

Kortmann Beton had an extremely short cycle time in mind. Due to the short travel distances resulting from the cramped spatial conditions, acceleration and deceleration ramps can only be used to a limited extent. The cuber has an all-electric design and thus conforms to the state of the art. The strict quality management of the concrete blocks is rounded off by an automatic block height measuring unit from R&W Industrieautomation and the use of a Qaver checking tool to check the fresh concrete properties.



Betonwerk Kortmann's portfolio is supplemented by a precast plant

A jointless and flat production board with good transmission of the vibration forces is necessary in particular for the high-quality block products manufactured by Kortmann Beton. All of this is guaranteed by the Wasa Uniplast Ultra through the addition of glass fibres to the solid plastic material, which – unlike, for example, wooden boards that are only coated with plastic – does not exhibit any signs of fatigue over the entire service life of the production board.

Blocks that don't meet the high quality requirements and are removed from the circulation are fed by Kortmann Beton to the plant's own raw materials recycling, which reuses these materials. This contributes to sustainable environmental protection and the preservation of resources, as does the company's production of most of its own electricity and heating requirements using a combined heat and power unit on the company site.

Special products made by the company are without doubt the Miscela und Passione ceramic slabs. These innovative products impress through a unique combination of a ceramic sur-



Outdoor storage space for concrete block products and precast elements

face and a strong concrete carrier. The concrete is thereby permanently cast with a ceramic surface. The spacers on the slabs achieve an even joint width, which enables fast, effortless installation on different types of substrate.

Kortmann Beton's specified goal for block production is the manufacture of a million square metres of paving per year. In parallel with the concrete block making plant, the family-owned company also produces precast elements, which make up about half of the Kortmann family's overall business.

The signs are good that Kortmann Beton will achieve the goal it has set itself of becoming one of the best in the industry. The machines and production equipment in operation represent an important basis for the attainment of this goal. The full picture of this likeable family-owned company is supplemented from the human side too by the fact that the third generation, with Henning and Matthias Kortmann and the young team backing them, is not only on the starting grid, but already up to full speed. ■



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FURTHER INFORMATION



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