

Weckenmann Anlagentechnik GmbH+Co.KG, 72358 Dormettingen, Germany

# Weckenmann has been manufacturing plants for precast concrete element production for 60 years

**Paul Weckenmann started a blacksmith's workshop with his wife Elfriede on 1 January 1957. Over the past 60 years that has grown into a machine and plant manufacturer with 155 employees who, with dogged innovative force, ensure that Weckenmann plants enjoy a high reputation all over the world. A Swabian success story!**

"A few years ago a customer from Mexico visited us and could hardly believe that such 'great machines' could be manufactured in such a small place as Dormettingen, which is smaller than his district in Mexico City." Wolfgang Weckenmann who, together with his brother Hermann, has managed the Swabian family-owned company at the foot of the Swabian Alb since 1989, grins as he tells this anecdote. And it's a fact: the world doesn't exactly revolve around Dormettingen, a village in the Zollernalb district with just 1,100 inhabitants.

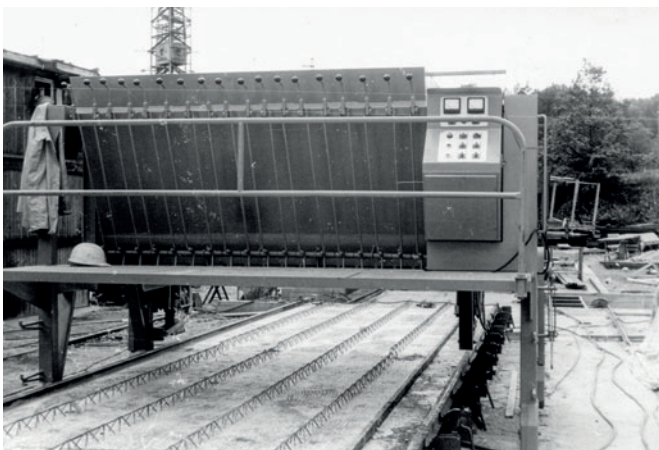
However, that didn't stop Paul Weckenmann from founding a blacksmith's workshop with his wife Elfriede back in January 1957. In the beginning, both of them earned a living from locksmith's work and dealing in agricultural machines. After a few years the young company began to produce shuttering and machines for the manufacture of concrete floor beams. The first customers included amongst others a manufacturer

of precast concrete elements from the neighbouring town of Dotternhausen. About 8 years later, in 1965, the young company delivered the first plants for the manufacturer of precast concrete elements to regional customers.

## Inventive genius in the company's DNA

Since then the Swabian machine and plant manufacturer has regularly shaken up the industry with its technical innovations. The company founder's two sons are rightly proud that Weckenmann Anlagentechnik GmbH & Co.KG from the small municipality in South Germany is one of the most innovative and therefore leading companies in the industry. Today the impressive plants for precast concrete element manufacture with the blue Weckenmann logo can be found on every continent. The mid-sized company employs 155 people at its two sites today. There is a second production location in Stassfurt in Saxony-Anhalt.

If one looks at the list of technical innovations with which the people at Weckenmann have constantly raised the manufacture of precast concrete elements to technically higher levels, one gets the impression that the dogged search for new solutions lies in the DNA of the family-owned company.



*One of the first concrete distributors from Weckenmann for the manufacture of precast slabs with in-situ topping.*



*Company founder Paul Weckenmann (centre) with his sons Hermann (left) and Wolfgang, who run the business today.*



*The construction of plants for the manufacture of precast concrete elements needs space: it must be around 3000 square metres here in Hall 8. Photo: Kraas & Lachmann.*

For instance, Weckenmann put the first concrete distributor for Omnia large floor slabs into series production in 1971, although it should be noted that the patent was held by a Weckenmann customer. However, the first 1:1 large-scale plotter for precast plants was an invention of the Dormettingen com-



*Aesthetic construction with precast concrete elements: development and sales centre at the headquarters in Dormettingen.*

pany and represented a giant step towards automation. It continued with the first MCP device for magazining, cleaning and plotting. Today, MCP systems from Weckenmann are mainly used for the manufacture of precast slabs with in-situ topping and double walls in small and medium series.



*"Algorithms don't build machines, but rather our employees, who contribute to the success of our company."  
(Wolfgang Weckenmann) Photo: Kraas & Lachmann*



*Cabling of a turnover spreader beam, which the user employs for the production of double walls.  
Photo: Kraas & Lachmann*

The first shuttering robot for the automated handling of the gigantic shuttering profiles came along in 1992. That is still a Weckenmann speciality today. Weckenmann is one of the leading suppliers in particular in the shuttering robot segment. At some customers, for instance, the patented Twin-Z shuttering robot provides for around a 30 percent cycle time reduction in comparison with a conventional shuttering robot. Thanks to the patented double-Z axis, even long and heavy shuttering profiles can be reliably positioned.

### Guaranteeing the future through technical progress

If one enquires at Weckenmann about the company's latest technical highlights, three abbreviations that appear cryptic at first stand out: MagVib, WAvision and MBM. "MagVib" stands for magnetically fixed vibrators and denotes a technology with which fresh concrete is compacted. Here, high-frequency vibrators for compaction are magnetically locked or clamped to the formwork pallets. This makes the compaction process significantly more efficient and above all much quieter.

With "WAvision" Weckenmann offers a modular controller for automated precast concrete element production. All of the company's data, from the work preparation through to production, are used and processed for the control of the plant in the WAvision system. WAvision is interface-open, enables the customer to establish an Industry-4.0 environment and ensures universal control, planning and analysis of the processes.

### Award-winning technology

The mechanical engineers from Weckenmann have won two coveted awards for their latest innovation, the "MBM®" mobile battery mould. In 2016 this innovative transportable battery mould won the Innovation Award of the State of Baden-Württemberg and was nominated for the Innovation Award at the bauma, the world's most important construction machinery trade fair. "This product enables the manufacture of laminar precast concrete elements in the immediate vicinity of the building site where the precast elements are being installed", says Hermann Weckenmann, explaining the benefits of the mobile battery mould. "The rapid growth in population and the increasing rural depopulation are making it necessary to construct huge amounts of affordable living space in the cities - and fast. That's not possible without precast concrete elements", says Weckenmann, and he adds: "Large building sites in areas of high population density don't offer any space for conventional precast plants in the immediate vicinity. Central precast plants are often too far away; the transport routes are too long and the logistics too expensive. We offer the solution to this problem with the MBM® mobile battery mould." The laminar precast concrete elements are manufactured upright in the transportable battery mould, which is virtually a mobile precast plant. The walls and floors are formwork-smooth on both sides and thus ready for installation on site with no further surface processing. The battery mould, with its heavy middle and outer shuttering, and the other central components are permanently mounted on a special vehicle. The complete assembly and disassembly can be accomplished within a few days by five to seven people.



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Formwork pallets from Weckenmann with their homogeneous shuttering surface can be up to 15 metres long and weigh 10 tonnes. Photo: Kraas & Lachmann



On the way to the customer: MBM® battery mould for the upright production of solid walls and floors.

### Algorithms don't build machines

This product particularly demonstrates the innovative force and the far-sightedness of the Weckenmann engineers - it is their answer to the future challenges resulting from of an increasing lack of homes. Weckenmann is therefore confident with regard to construction with precast concrete elements and thus the requirement for innovative plant concepts. The company sees itself today more than ever as a full-range supplier that delivers turnkey systems, from the shuttering profile to the IT controller. Systems with which precast concrete elements are also manufactured for such renowned buildings as the Acropolis Museum in Athens or the Technical University of Dresden.

"The challenges for us as a mid-size family-owned company lie not so much in the worldwide demand for precast concrete elements, that's big enough", declares Wolfgang Weckenmann. "We face the constant task of finding motivated and qualified employees, and that's not simple. Firstly, we need teams with which we can master the technological developments, the catchword being digitisation. And secondly we need people who can and want to suitably support customers and projects all over the world in the most diverse cultural groups, because despite all of this technical progress it's the people in our company who advise our customers, develop our concepts and build our machines. And if a plant should happen to have a malfunction, it's not the algorithm that gets the user out of trouble, but the Weckenmann Service, which can always be reached if the worst comes to the worst.

The future as a task and not a terrifying vision - the people in Dormettingen have been facing up to this task for 60 years now. It will be exciting to see what ideas the Weckenmann think tank will come up with in the future for the innovative manufacture of precast concrete elements. ■

#### FURTHER INFORMATION



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