

KARLOS - efficient and economical concrete walls from the 3D printer

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From 24 to 30 October 2022, Putzmeister will be presenting many innovations relating to the construction site of tomorrow at bauma 2022 in Munich. Low productivity and the shortage of skilled workers on the construction site will also be a topic. Putzmeister is countering this trend with the mobile and highly automated KARLOS 3D printer.

A solid wall straight from the 3D printer: With KARLOS, concrete walls can be built in a short time - without any conventional formwork and with classic standard concrete! As a highly innovative combination of a mobile concrete pump and precise robot technology, KARLOS allows for a quick set-up on the construction site and a highly automated creation of walls. This not only reduces manual labor and safety risks on the construction site, but also enables more efficient and time-saving construction compared to conventional construction methods. In addition, the use of standard concrete with a maximum grain size of 8 mm, which can be supplied from conventional ready-mix concrete plants, creates considerable potential in terms of the cost-effectiveness of the manufacturing process. Sustainability is not neglected either:

KARLOS operates fully electrically and with low emissions on the construction site and creates the possibility to use CO₂-reduced concrete formulations.

A major advantage of the technology is the digital consistency of the design and construction process. Planned components are extracted from digital building models and then translated into individual print layers. In the process, the print path and print speed are defined based on various parameters (opening time of the material, load transfer of the material, etc.). This path planning is then transferred into a machine control code and read in on the machine. KARLOS then prints the building layer by layer, automatically processing the plan.

Visitors to bauma 2022 will have the opportunity to experience KARLOS live at the Putzmeister booth.

Source: Putzmeister Concrete Pumps GmbH