

### **New dimensions in terms of flexibility, precision and speed**

## **Robot technology finding its way into house construction**

The latest development in the field robot technology proves that we – as a market leader in the sector plant engineering for the prefabricated construction industry – offer our customers solutions for the future.

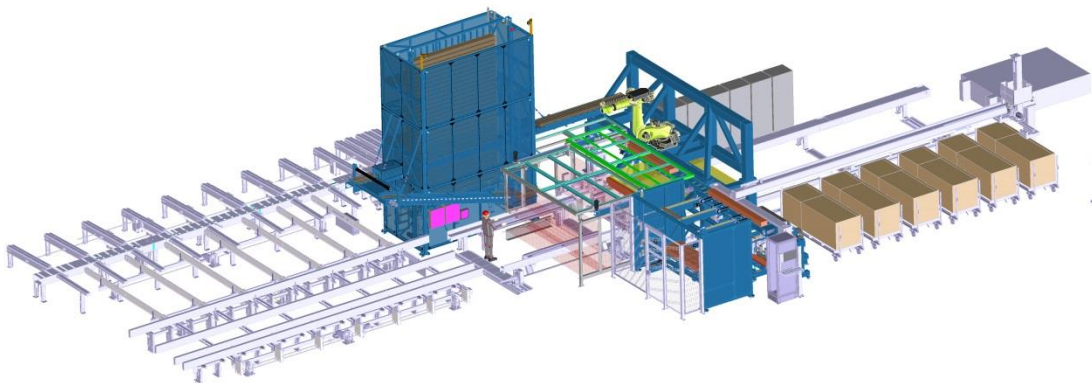
For the first time, we integrated a robot into a WEINMANN production line. The production cell consists of a carpentry machine WBZ 160 powerSIX with a fully automatic feeding portal, a random storage system for the processed studs, a storage system for standard studs, a frame work station and the robot.

All studs that are to be machined such as lintels or bevel cuts, as well as top plates or bottom plates, are automatically machined by the carpentry machine WBZ 160 and automatically fed into the random storage system, the so-called "stud tower". There, the required stud is selected and fed to the robot. The standard studs are fed-in automatically by means of a line portal. The robot now removes the required stud from the respective pick-up location and places it in the frame work. The top and bottom plates are fed automatically by means of driven rollers.

This is the ideal usage site for such a technology, because the robot, with little maintenance and no fatigue, puts any kind of style into the structure at any angle. In this way, not only inner and outer walls but also gable walls and miter walls, as well as window and door structures, are manufactured fully automatically. In addition, the 6-axis technology makes it possible to adapt the insertion method for different studs, which enormously increases the reliability of the operating system and virtually compensates current problems, for

example caused by crooked wood or the like, without manual intervention.

The first production line in this form has been installed at a German prefab manufacturer's premises since the beginning of 2017. The next one will be assembled at the end of 2017 in Sweden, where the most modern production facility in Europe is currently being built. There, a complete wall module will be produced within just 30 minutes, and a wall element within 7 minutes. For this purpose, the robot places a stud into the framework every 7 seconds - a pace that would not be achieved manually, without robotics. This combination of man and machine achieves a degree of flexibility, precision and speed, which so far has not existed in timber construction.



Source image: WEINMANN Holzbausystemtechnik GmbH