

Echo Precast Engineering NV, 3530 Houthalen, Belgium



# Continuous production automation of high compacted hollow core slabs

Advanced technologies and continuous production optimization are two unchangeable factors that have been driving Pozbruk for 37 years. A consistent implementation of that approach makes Pozbruk one of the major Polish manufacturers in its field and a pioneering researcher of precast concrete products. Their newest plant is a hollow core production area equipped with an extruder X-Liner® with 6 core x 200 m and 4 core x 400 m. In addition to the new extruder also a 5 core 500 mm nozzle unit has been installed.

Hollow core slabs are used in housing, public, commercial, and industrial buildings. According to the Polish industry leader, this is the best solution for buildings with large ceiling spans. An example is the new project on which Pozbruk is currently working on - the B10 office and hotel complex in Wroclaw (Poland). The building uses 16.2 m long hollow core slabs produced on the new machinery engineered and provided by Echo Precast Engineering, a company of the Progress Group.

Pozbruk management states that: "The decision to purchase the new extruder X-Liner FC was made, to improve the production of the hollow core slabs. The most important thing for us was the quality of the final product. Echo has a reputation that guarantees that" and adds: "Working under the supervi-



*With a professional installation, the extruder was up and running within one day.*

sion of a professional service allowed us to start production with the new extruder in one day. We value the professionalism and will certainly continue our cooperation in the future." Currently, the production of 400 and 500 hollow core slabs per day, which represents a big challenge in prefabrication, is running smoothly.



*The modular machine design makes it easy to maintain and clean this extremely reliable and easy to operate machine.*



*With the new machinery they can produce high-quality hollow core slabs, while also guaranteeing a high degree of fire resistance.*



High surface quality of the hollow core slab is achieved easier with a highly automated machinery park.

### Extruder X-Liner

The Extruder X-Liner FC is a machine designed for the manufacture of hollow core slabs, which proves its worth by its technological features and operator-friendly characteristics. The concrete to be moulded is pressed into a mould frame and compressed there. The moulded, stable concrete can remain behind the machine and cure.

The X-Liner FC is a fully automatic machine, easy to adjust and completely controllable. Not only the concrete formula, but also the key components of the machine, the screws, can be individually adjusted. Switching to producing a different floor height is rapid and simple. This allows for the rate of production to be adjusted and the entire operating process to be optimised. The modular machine design makes it easy to maintain and clean this very reliable and easy to operate machine. With this system high-quality hollow core slabs can be produced, while also guaranteeing a high degree of fire resistance. The screws, which are known as "shark screws", because they are shaped like shark fins, have been designed specifically to optimise the piling of the concrete and to increase compaction and rates of production.

The cross-sections comply with the Euro-codes and EN 1168. The ratio between load and span can be adjusted by changing the concrete strength parameters and the reinforcement plan to suit specific applications exactly. ■



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The prefabricated elements can be implemented faster and safer at the building sight.



B10 office and hotel complex in Wroclaw (Poland).