

Nordimpianti System Srl, 66100 Chieti (CH), Italy

Two new automatic machines for Cross Concrete Flooring Ltd in Northern Ireland

Cross Concrete Flooring Ltd, based in the north-west of Northern Ireland, on the outskirts of Derry City, is a well-established company that has been operating for over 20 years in the manufacture and supply of precast concrete elements for floors, stairs and other products for both residential construction and agricultural applications. The company was founded in 2005 by father & son duo John & Stephen Harkin. The factory is located in the village of Drumahoe and the company has two dedicated sales offices. Finished products are shipped to many customers both in Ireland and the rest of the UK. From the beginning Cross Concrete Flooring has specialised in the production of pre-stressed concrete elements for hollow core slabs, both in 600 mm widths and in the standard 1200 mm width, with sections ranging in height from 150 to 250 mm.

As part of a recent program to modernise its production plant, Cross Concrete Flooring began collaborating with Nordimpianti System, one of the world-leading Italian companies with over 50 years of experience specialising in the design and manufacture of a full range of machinery and equipment for the production of pre-stressed hollow core concrete slabs.

During 2022, Cross Concrete Flooring took delivery of a new Extruder model type machine, the EVO2, Nordimpianti's top-of-the-range extruder and a battery powered fresh concrete longitudinal 500 LPB saw.

In addition to supplying the new machines, adapted for use on Cross Concrete Flooring's existing production beds, Nordimpianti sent its own specialised technicians to the Londonderry plant to carry out on-site commissioning and testing, as well as training staff on equipment use and maintenance. The introduction of the new Extruder has brought many benefits. These include an increase in product quality due to the use of 'shear compaction' technology which allows for better control of the process. This technology does not use vibration and therefore has the added advantage of lowering



EVO2 Extruder from Nordimpianti



EVO2 extruder during the casting phase



High quality product finish

noise emissions. Higher production rates are achieved quite simply because the Nordimpianti extruder can operate at high production speeds.

With the fresh concrete saw, it has been possible to make longitudinal cuts in the floors for non-standard sizes immediately after the extrusion process, instead of using a traditional saw

cutting after the concrete had set. The use of the fresh cutting saw further reduces the production time and saves on cutting blades, while also improving the cleanliness of the production beds, as no water is needed to cool this type of blade.

An additional advantage of the fresh concrete saw is that it is powered by rechargeable batteries, avoiding the use of power cables and offering greater flexibility and ease of use when moving between different production beds.

Since taking delivery in 2022 Cross Concrete Flooring has had the chance to fully experience the build quality and operation of Nordimpianti's machines. The machines completely satisfied their expectations and thus, with the aim of further improving production times and efficiencies, the company recently opted to purchase two new automatic machines from Nordimpianti, a C500AM multi-angle saw and a PL1200H combined Plotter and driller.

The two new machines were delivered during the summer of 2025 and successfully commissioned at the same plant in Northern Ireland, perfectly complementing the existing machines.

Before being shipped to Northern Ireland, Nordimpianti was kindly given permission to display the plotter at its stand at the Bauma 2025 trade fair in Munich, Germany.

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NORDIMPIANTI's expertise in the manufacture of reliable, profitable and high quality production machines and equipment is internationally proven.

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Plotter destined for Cross Concrete Flooring at the Bauma 2025 Exhibition

The new automatic machines reduce labour costs and allow the production process to be optimised.

The C500AM multi-angle Saw works autonomously using computerised control coupled with a laser rangefinder to position itself with extreme precision. It is capable of carrying out cross-cuts, angled cuts or longitudinal cuts on the floor slabs along the entire length of the production bed. The cut-



C500AM multi-angle saw from Nordimpianti

ting points and angles, established during the production planning phase, are downloaded onto the saw using an appropriate text file.

The double telescopic cover for the cutting blade and a pressurised water spray system for cooling the blade ensure that dust emissions are significantly reduced.

The PL1200H plotter is a dual-purpose machine. It works independently and uses indelible ink to mark the slab with alphanumeric identification codes and text useful for product recognition and traceability, as well as to drill holes that allow for water to drain from the voids.

The plotter is powered by a rechargeable battery. It employs a computerised control system and a laser rangefinder as well, to achieve maximum precision. It is equipped with two print heads, one for the upper surface and one for the side. The information and data to be printed are saved in appropri-



PL1200H Plotter from Nordimpianti



The new plotter working in combination with the EVO2 extruder supplied in 2022

ate text files, prepared in the office, and uploaded via WLAN or USB key.

While marking the floor slabs with ink, the machine also drills holes at precise locations to allow water to drain from the voids to prevent possible water accumulation and subsequent water leakage or spoilage once the floor slab has been assembled on site.

This operation, now fully automated, was previously performed manually, as was the measurement and marking of the floors for cutting. In addition to reducing the amount of labour required, human errors have been significantly reduced, improving the quality and productivity of the plant.

Following the success of the first shipment and given the excellent results now achieved with the use of the two new Nordimpianti automatic machines, Cross Concrete Flooring confirms its commitment to investment and innovation, with a view to continuously strive to increase the quality of the finished product, to improve working conditions in the factory, to optimise plant productivity and to maximise profitability. ■

FURTHER INFORMATION

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