

Nordimpianti System srl, 66100 Chieti (CH), Italy

# A new extruder for BPM in Brazil

The city of Criciuma, located in the Brazilian state of Santa Catarina is home to BPM, founded 35 years ago by husband and wife team Nivaldo de Loyola Richter, an engineer and his wife Cynthia Minatto Brandao Richter, an architect. The company was involved in the manufacture and assembly of prefabricated structures for the civil construction industry mainly serving the markets of Santa Catarina and Rio Grande du Sud areas. In those early days their production unit made products such as poles, columns and beams.

In 2012 BPM built a new plant for the production of hollow core slabs, BPM could produce within its facilities prestressed hollow core slabs of thicknesses between 150 mm to 300 mm with a base width of 1200mm. This production was carried out with a wet casting machine. In those days the company had a production capacity of 20,000 m<sup>2</sup> per month.

As BPM's reputation in the market grew so did the requirements of its customers. The market was beginning to demand hollow core slabs that could take higher loads and with thicknesses greater than 300 mm in height. It was at this point that the husband and wife duo started to seriously look at how they might use other production technologies to produce hollow core slabs in a more efficient way.

Their participation in technical missions to Brazil and Europe, as well as them attending the Concrete Show in Brazil and the Bauma Exhibitions in Munich gave them good exposure

to other technical possibilities and also the major suppliers of equipment in this field.

The need to be able to produce thicknesses greater than those they were producing and the desire to be one of the first companies in Brazil to reduce their production carbon footprint led BPM to start a journey in search of a solution that would allow them to reduce their cement consumption, reduce their concrete consumption, minimize concrete losses at the end of the production bed and have an element whose actual manufactured profile and hence weight is closer to its designed profile and weight. All these advantages were found in a single machine, the Extruder.

During 2021-2022, they were joined in this process by Thiago Pieri, Area Sales Engineer for Nordimpianti. Thiago presented to the team at BPM a prospectus of what advantages the machines from Nordimpianti could offer, information that Nivaldo and Cinthia were able to verify for themselves by visiting other companies in Brazil that were already using the EVO and EVO2 machines.

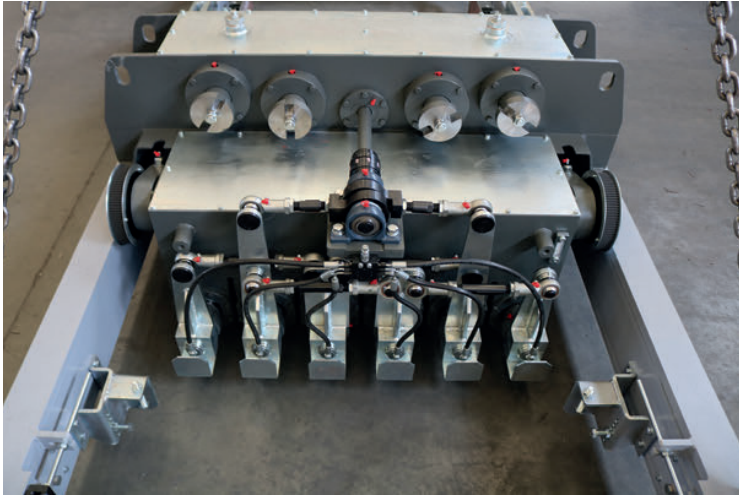
Amongst many advantages some really stood out. The inherent low cost of maintenance of the overall system, the 40% lower cost of auger changes when using Nordimpianti's split auger system as well as the weight advantage of hollow core slabs produced by the EVO and EVO2 extruders.



Headquartes of BPM



New plant in Criciuma



Oil bath gear box

During this research, cuts, measurements and weight checks were performed on production slabs both on the equipment used at BPM, on slabs produced by local and foreign extruders as well as those from Nordimpianti's customers using the EVO and EVO2 machines. It was shown that the slabs made by Nordimpianti's machines were lighter but still had better structural specifications than slabs from other technologies or competitors.

Nivaldo and Cinthia were further surprised by a feature of the Nordimpianti EVO and EVO 2 machines that made these machines unique and really stand out from the crowd. This was the fact that the machine's transmission was not exposed to the harsh environmental elements of the production area, but fully protected in a gear box casing and fully immersed in an oil bath giving continuous lubrication. This translates into less maintenance time and greater reliability and this in turn has a direct effect on the bottom line.

With the final data collected Nivaldo and Cinthia decided to travel to the Bauma exhibition in 2022 where they would do a final tour of the machinery manufacturers. Their ultimate decision was to choose the Nordimpianti EVO 2 Extruder.

They opted for the most complete version of the EVO2 and with 4 forming inserts for the production of:

- 8 hole hollow core slabs 150 mm high
- 6 hole hollow core slabs 200 mm high
- 5 hole hollow core slabs 250 mm high
- 4 hole hollow core slabs 300 mm to 500 mm high

The EVO 2 is available for the Brazilian market in 1200mm and 1250mm base width versions. In this case the client opted for the 1200mm version to be compatible with their current



Agreement between CEO of Nordimpianti and CEO of BPM

system. The EVO 2 machine was commissioned in September 2023 with immediate production results. The quality, the speed, as well as all the savings that were obtained, left the entire BPM production staff impressed. They also achieved another of their goals of reducing the carbon footprint in comparison with their other technology. ■

## FURTHER INFORMATION

# nordimpianti

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