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SPECIAL PRINT



## PRECAST CONCRETE ELEMENTS

INNOVATIVE HOLLOW CORE PLANTS FROM ITALY

**nordimpianti**  
Technology for Precast and Prestressed Concrete Industry



■ Nordimpianti System Srl, 66013 Chieti (CH), Italy

# Innovative hollow core plants from Italy

For more than 30 years Nordimpianti System acts in the supply of machinery and complete plants for the production of a wide range of pre-stressed concrete elements, such as T-beams, hollow core slabs, vineyard posts, lintels, etc. all over the

world. Placed in the middle of Italy, about two hundred km far from the capital Rome, its head-quarter is situated in Chieti, on the Adriatic coast, in the so-called green region of Europe: the Abruzzo.



*View inside the production facilities of Nordimpianti Systems in Italy*

Nordimpianti is a dynamic company, fortified by skilled workers with lots of experiences in the concrete machinery business. It operates with constant investments in innovation, quality, safety of the products and after-sales services in more than thirty countries all over the world today.

## History

In the eighties Nordimpianti planned and started, first in the world, an important series of slipform machinery that are able to realize prestressed concrete elements as hollow core slabs and inverted TT-

Panels, up to 1 meter high. This was a real innovation for that period, and it was the result of the strong interest to consider also the "niche" needs of a small market. These machines are also able to work with wire mesh reinforcement, additionally to classical prestressed strands. That means that they can produce products that were in the past reserved for standard steel formwork. Nordimpianti's technicians have grown with these experiences, and today they are very reliable partners to realize unique plants in the world in this field.

## Success story of the carousel production system for hollow core slabs

Looking at the production of prestressed elements, traditional plants normally have a standard layout with production beds of variable length, that are fixed to the floor. The machinery moves on the beds in accordance with the production process: Preparation of the bed first, elements casting second (with extruder or slipformer), and elements cutting - after curing -



*The prestressed concrete products up to one meter high are one of many specialities of Nordimpianti*

third. Plants with this layout are working today all over the world, but when high production capacities are needed, they can be satisfied with very huge plants that need a lot of space and many workers, only.

Nordimpianti's innovation consisted in applying the carousel production system, known since many years in the sector of prefabrication, for the realization of both prestressed T-beams and hollow core slabs with production beds that move beneath the stationary casting slipformer and sawing machinery.

In a traditional plant the production machine as well as the sawing machine

move on the whole length of the bed, causing sound and air pollution, and debris along the corridor between production beds. In the carousel plant instead, the casting machine and the saw are stationary fixed, while the beds move underneath thanks to powered longitudinal bogies.

The principal advantages coming from this type of plant are:

- 1) Industrialization of the production process with consequent reduction of labour cost necessary per square meter of floor produced;
- 2) Rational utilization of the investment because the plant can work with a

continuous cycle twenty four hours a day. There is no need to wait, like in traditional plants, for the hardening of the products on the production beds.

- 3) Improvement in working conditions compared with traditional plants, because two fixed stations of work (casting and cutting) produce less sound and air pollution, and they are easily circumscribed in close environments.
- 4) Environmental advantages, because if there is only one place inside the production hall where concrete debris and waste water are produced, it is much easier to organize a proper recycling management of the plant.

## Strategy

Strength points of Nordimpianti are the extreme production flexibility and the capability to personalize products to the specific customers' requests.

Nordimpianti offers solutions for customers who want to start with low initial cost of investment, and they have solutions for consolidated companies that are looking for more sophisticated production facilities and completely automated plants like a carousel plant.

Maintenance cost of Nordimpianti machinery is kept low, and necessary maintenance itself is kept easy. A wide choice of standard products and spare parts are available in Nordimpianti's spare warehouse, ready to be sent to the customers in short time.

## Markets

Since their first years of activity, Nordimpianti was a brand for technical and commercial competence, and they became very strong in the principal European markets where until today they have important market shares. One of their most important market currently is Great Britain where an imposing carousel for hollow core slabs has been realized for one of the major producers of these elements.



*Carousel production system with stationary production machine*



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*Recent installation of Nordimpianti in UK*

An increasing demand for Nordimpianti machinery from the Middle East, particularly from countries like Kuwait, Bahrain and also India and Pakistan for instance, with a strong economic territorial growth, can currently be observed. Nordimpianti has strengthened its presence in all these places with professional representations, able to manage efficiently the relationship with the customers. Important productions already started in Mexico, Brazil, Venezuela and Costa Rica. The next step for Nordimpianti will be the entry to the North American market, where they already started to be present at major fairs and to collaborate with local companies.

### BAUMA 2007

At BAUMA 2007 at booth B1.317, Nordimpianti will present to their customers layouts from recent plant installations, including the carousel production system with stationary production and sawing machines. A full-size extruder from Nordimpianti will be on stage, as well. One should not miss to visit one of the most innovative companies in the prestressed hollow core sector at that date!

### Further information:



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