



# De Doncker set for growth with new state-of-the-art production plant in Belgium

De Doncker bv supplies a versatile range of materials for structural work. The company has built a reputation as a building materials trader, which also produces wide slabs. In addition, there is a small production unit for beams and columns, as an extra service for existing customers. De Doncker has been active in the sector of the concrete industry from Roosdaal for more than 95 years. The Belgian company has always considered it important to serve customers with a full range and has therefore recently started the production of concrete walls. With a brand-new production facility and a state-of-the-art production carousel and concrete plant, the company is now able to serve East Flanders, West Flanders, Walloon Brabant, Wallonia, and part of Antwerp smoothly.

## D-Beton focuses on larger projects and larger dimensions

D-Beton is a sister company of De Doncker bv, with the majority shareholding of the owners and makes it possible to diversify production and to absorb the over-demand that cur-

rently exists. It is situated in Aalst, which is centrally located in Flanders. Part of the production of the wide slabs has been transferred from Roosdaal to Aalst. D-Beton also produces insulated double walls and XL wide slabs and therefore focuses on larger projects and larger dimensions.

## Partnership with Progress Group

De Doncker chose Ebawe Anlagentechnik, Progress Software Development and Progress Maschinen & Automation, all subsidiaries of the Progress Group, as its supplier. Indeed, the Belgian company uses a whole range of Progress Group machines and software in their production. Once all the technical and commercial details had been clarified, assembly began in Aalst in summer 2020.

According to Dominique Zyde, responsible manager at D-Beton, the current market situation is quite good for the moment, the company does not have any problems with orders and the production sites are fully busy as well. Even if it is difficult to estimate, given the circumstances, works have pro-



The new production facility in Aalst is fully operational for production and equipped with the latest technology.



The Wire Center places reinforcement fully automatically and improves production output.



Extended view of the plant with the automatic wire processing units as well as the fully automatic shuttering robot including a pallet cleaning device.



The concrete spreader distributes the fresh concrete into the shuttered pallets, with the made to measure reinforcement already in place.

gressed well. Mr. Zyde provides project support for the construction of the new location to produce precast concrete elements in Aalst. The assignment consisted of the selection of the various suppliers and contractors, the preparation of the works, the follow-up of the works on the site, commissioning, and start-up of the entire company. The new production site is working very hard to have a short line, being able to react quickly and producing standard products for the construction market. They supply from small contractors, which are building small apartments, to main contractors on the biggest level, which are doing office buildings or parking garages.

### Automation and innovative technology by the new carousel system

The scope of delivery includes a Form Master shuttering robot in combination with a fully automated pallet cleaning device. With the new pallet carousel system, D-Beton is taking another important step towards full automation of precast element production. The workflow has been optimized through a thorough planning of all the product flow in the plant. Containing additionally a concrete spreader in bridge design with compacting equipment and interface to a fully



The demoulding crane provides a safe removal of the elements.

*The pallet stacker for stacking and destacking of the pallets fully automated by ebos®*



automated mixing plant as well as a turning device with appropriate compacting equipment. The plant is also equipped with an automated pallet stacker in addition with a demoulding crane with demoulding traverse ensures a safe removal of the finished precast elements. An interesting feature of the demoulding crane is that not only lattice girder floors can be lifted as usual but also double walls both in horizontal and in vertical position. Although D-Beton is very keen of the manual quality control the automation of the plant is saving a lot of time and, also with the very well planned use of the space, can handle possible production problems in a short time with alternative routes. The new production system guarantees an automated precast production of double walls, insulated double walls and floor plates. The precast elements manufactured there are primarily used in housing and industrial construction. Within the plant also a master office with optimized axis of view has been created which can overview the whole production process.

### Optimizing reinforcement preparation

Reinforcement processing was optimized by integrating the Wire Center. It comprises the multi-strand MSR 16/6 multi-rotor wire straightening and cutting machine which permits fully automated wire diameter changes in just a few seconds, thus enabling all wire diameters to be provided just in time. Together with this a wire laying robot with semi-automatic feed

with (for now still) externally supplied lattice girders ensures a wider range. Further features of the Wire Center include an automatic sorting and feeding system for plastic spacers, a bending machine for crimping the ends of the bars on one or both sides, as well as a magazine serving as a deposit and buffer storage for the bars which can be retrieved from the system and lifted onto the pallet automatically as needed.

### Complete software solution with ebos and stabos

D-Beton chose ebos® as its MES system, developed by Progress Software Development, also a Progress Group company. With ebos all manufacturing processes are carried out in one complete, user-friendly system. An innovative 3D visualization of the carousel plant makes it even easier to keep an eye on production. Machine and production data can be easily collected and evaluated with the integrated stabos-software. Thanks to the unique web interface the analyzing and reporting of the whole carousel plant can be done from everywhere.

Dominique Zyde is very satisfied with the new production plant: „We cooperated very closely with our supplier. Progress has proven a high level of efficiency. They developed an innovative production process to respond to all our needs. The quickness of their reaction was definitely a decisive factor.“



Production of first double walls.



Double walls prepared for the transport to the building site.

Thanks to the new production plant from the Progress Group, the Belgian company is able to make its product range more flexible. They are now producing a higher number of finished products with high quality standards and less manpower. ■



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