

HIGHEST STANDARD SMOKE CONTROL SYSTEM FOR THE CUTTING-EDGE HOSPITAL



HUMAN CAPITAL

The new Delta hospital of the innovative hospital group CHIREC (Centre Hôpital Interrégional Edith Cavell) is under construction in Auderghem, one of the municipalities located to the South East of the Belgium capital Brussels. In addition to this state-of-the-art hospital, a residential living area called Deltaview is also realised. For this ambitious development, land owner CHIREC, project developer Willemen Real Estate (Mechelen) and renown architects office Assar (Brussels) joined hands.

The modern hospital of 500 beds on 7 levels totalling 104,000 m² is conveniently located and easily accessible, which will enable the hospital group to meet the expectations of the beneficiaries by offering them high quality care in bright,

welcoming and comfortable spaces.

All spaces have been designed to ensure easy accessibility with easy circulation for patients and visitors. Everything has been thought out to optimize the functionality of the building, to ensure the user-friendliness of the spaces, to offer maximum comfort to patients, while preserving optimal working conditions for doctors and staff.

The construction of the Delta hospital will be accompanied by the establishment of commercial structures, restaurants, residential living areas and hotels that will stimulate activity and employment in the region. Underneath the Deltaview living area a large 5-level underground car park will be realised, with 1,300 parking spaces.

SAFETY FIRST

In this project, NOVENCO Building & Industry was awarded two contracts, one for the smoke control system of the shopping gallery on the ground floor of the hospital and another for the ventilation and smoke control system of the underground parking.

Project completion is scheduled for the end of 2017.



Impressive construction site

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EQUIPMENT DELIVERY

For the smoke control system of the shopping gallery, NOVENCO Building & Industry (NBI) has designed and delivered a complete vertical smoke control system to keep a smoke-free layer in the gallery in case of a fire. For the smoke exhaust system, 3 large ACN-1000 F300 smoke fans have been delivered with a smoke extraction capacity of 60,000 m³/h per fan. The system also included a control panel, cabling, mounting, commissioning and hand-over to the client.

For the 5-level underground car park with in total 1,300 parking spaces, NBI designed and delivered the complete ventilation and smoke control system. The NBI system design and functionality was checked with a CFD (Computational Fluid Dynamics) simulation of the five parking levels of 10,000 m² each. In total, 6 large smoke fans with impeller diameters varying from 1,4m to 1.6m have been delivered, with a total capacity of more than 400,000 m³/h. To support the ventilation and smoke control system, a large number of CGF-500 car park jet fans have also been installed. The system also contained the delivery and installation of a control panel, synoptic panel, cabling, high temperature smoke control dampers, smoke screens, grilles and a CO detection system complete with UPS and evacuation alarms. Before hand-over to the client, the system will be tested and optimized thoroughly by NBI engineers during the commissioning phase.

FACTS:

- 7-LEVEL CONSTRUCTION
- 104,000m² TOTAL AREA
- 5-LEVEL UNDERGROUND CAR PARK



Ultra-modern Delta Hospital



Axial flow fan NovAx ACN 100 F300



One of the fan exhaust towers