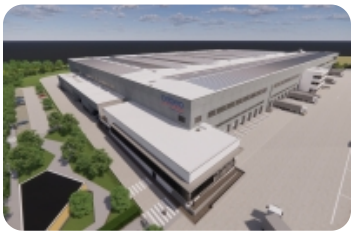
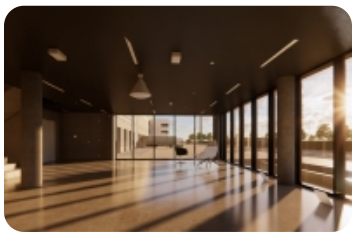
CEBEO

Architect	Atelier d'Architecture Van Oost SPRL
Diensten	BIM
	Industrial MEP
Code	21.165
Klant	Cebeo NV
Sectoren	Industry
	Logistics

Beschrijving

bouwen van een distributiecentrum





CEBEO is building a new logistics distribution center in Doornik. The focus is not only on achieving maximum CO_2 neutrality. The building will also be able to supply energy to its neighbors during peak times.

The Belgian market leader in the distribution of high-quality electrical products has 1.6 million product references, 50,000 of which can be delivered within 24 hours. A smooth logistics flow is therefore crucial. The new distribution center is necessary to keep up with CEBEO's growth ambitions. The first shipments will depart from the new location in the fall of 2023. The site's location right next to the E403 and E42 exit complex in Blandain ensures optimal accessibility.

On the 12-hectare site, a building of 40,000 m^2, 18 meters high, and with 32 loading and unloading docks will be constructed, designed by AAVO Architects. In addition to administrative offices, there will also be a logistics office and a gatehouse where trucks and delivery vans must check in. The majority of the building is logistics space, a semi-automatic warehouse from which Cebeo supplies all its customers, either directly or through its extensive branch network. The logistics center will be a state-of-the-art building with full attention to employees, customers, and the planet.

BREEAM

Intercommunale IDETA – owner of the industrial zone – seeks partners in sustainability, not coincidentally one of CEBEO's core values. The new distribution center will therefore be BREEAM Excellent certified. The choice of techniques makes this ambition possible.

A BEO field with 72 boreholes up to a depth of 100 meters will be installed under the parking lot. The offices are equipped with radiant ceilings, which increase work comfort. Due to the extensive insulation of the building envelope, it is mainly necessary to cool the office spaces, even in winter. In the

warehouses, heating will be needed. This ensures that the BEO field remains balanced, even in the long term. The base temperature in the warehouses is provided by the heat from the BEO field, while the difference between the base and comfort temperature (including peaks down to -8°C outside) is generated by a 550 kW air-water heat pump. In winter, heat recovery is also fully utilized, both from the compressed air compressor and in the high-voltage room and IT rooms. In warm months, the BEO field enables free cooling, further reducing energy consumption.

Advanced smart building technology has been implemented in lighting, presence detection, stock management, and management platforms. Of course, CEBEO was the ideal party to put the latest trends in lighting control, data management, and automation into practice.

Maximum use of the sun

The enormous roof area is fully utilized to place PV panels, with a total capacity of approximately 3.35 megawatts. CEBEO will not be able to continuously consume everything that is generated. Therefore, in collaboration with IDETA, the excess electricity is distributed to other companies in the industrial zone.

Onebim

Our sister company Onebim is also closely involved in this project. Due to the large area of the project, the combination of offices, workshops, and (automated) warehouses, and the collaboration with various suppliers, it was crucial to have a fully coordinated BIM model. To have maximum free height and flexibility inside, all cables and pipes were routed through the IV girders.

Onebim detected all potential clashes of techniques and stability in the design and execution phase and resolved them. Data management is also on the agenda. Data is collected on all materials and technical installations used in the building to deliver a highly detailed as-built plan that enables efficient facility management.

Remarkable project

The new logistics distribution center is remarkable in several ways. The building is not only ahead of its time in terms of the latest innovations in smart buildings, which is evident when the client is the market leader in such products. Most notable is the fact that the warehouses are heated and cooled by a combination of geothermal energy, heat recovery from compressors for compressed air, and cooling towers. This significantly increases the comfort of employees on the work floor and leads to a BREEAM Excellent building with a very low CO_2 footprint.

Construction partners:

- CEBEO (Waregem) – client
- AAVO Architects (Moeskroen) – architect
- Willy Naessens (Wortegem-Petegem) – prefab contractor
- Encon (Bilzen) – BREEAM assessor
- Onebim (Kortrijk) – BIM coordination and data analysis
- BM Engineering (Kortrijk) – special techniques