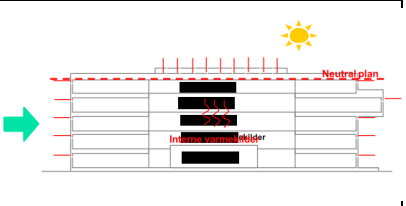
DK_Hellerup_NCC Headquarters

Image 01: South/west façade ©Window Master	**Image 02:** Atrium ©Window Master	**Image 03:** Ventilation scheme ©Window Master
		

Building Specifications

Address	Tuborg Havnevej 15, 2900 Hellerup, Denmark
Building Category	Office
Year of Construction	2000
Special Qualities	n/a
Location	56° northern latitude, 11° eastern longitude, close to the water
Climate	Cfb (warm temperate climate, moist with adequate precipitation in all months and no dry season, warm summer with the warmest month below 22°C)

Vent. Cooling Site Design Elements (Solar Site Design and Wind Exposure Design, Evaporative Effects from Plants or Water)

The building is located at the sea side of Øresund so it is partly surrounded by water and exposed to coastal winds.

Vent. Cooling Architectural Design Elements (Form, Morphology, Envelope, Construction & Material)

Building form: Compact four-storey squared shape building

Morphology: Office areas at each floor are connected to the atrium. Mechanically ventilated rooms (kitchen, dining areas, toilets and utility rooms) are located in the corners at each floor

Envelope: The façades have large window sections at each floor (north and south facades are almost fully glazed). The cantilevered volume at 4th floor on the south side of the building provides sun protection to the floors below (2nd and 3rd floor). A large skylight is located on the roof above the atrium.

Material: Lightweight material façades in west and east. The horizontal divisions (slabs) and some interior walls are made of concrete.

Vent. Cooling Technical Components (Airflow Guiding Components, Airflow Enhancing Components, Passive Cooling Components)

Night ventilation is provided by automated window ventilation, making use of the stack-effect via the atrium. Comfort ventilation is done by automated window ventilation. Inside the atrium there is a water surface located which has positive effects on the indoor climate especially during the heating season. Adjustable external solar shading is installed to the east and west oriented windows. Internal sunlight protection is added to the north and south sides of the building.

Actuators, Sensors and Control Strategies

Room sensors for temperature and CO2.

Each window section in each façade is controlled independently to avoid cold drafts during the heating period.

Window openings are controlled according to room temperature in the different control zones.

NV Advance™ natural ventilation system controls the indoor climate.

Building Energy Systems (Heating, Ventilation, Cooling, Electricity)

Hybrid ventilation with automated natural ventilation

A lot of the heat is obtained from the passive solar heating.

Information about electrical systems is not available.

Building Ownership and Building Facility Management Structures

Ejendomsinteressentskabet Tuborg Nord C. is the owner of the building. The building is rented out to several companies.

Acknowledgements

n/a

Datasheet Source:

WindowMaster A/S, Statens Byggeforskningsinstitut