

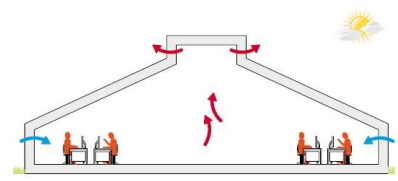


DK_Hørsholm_Scion DTU (Pyramid)		
Image 01: The east façade © Window Master	Image 02: Automated windows © Window Master	Image 03: Ventilation scheme © Window Master
		
Building Specifications		
Address	Dr. Neergaards Vej 5C, 2970 Hørsholm, Denmark	
Building Category	Office	
Year of Construction	1988 (Renovated 2010)	
Special Qualities	n/a	
Location	56° northern latitude, 12° eastern longitude. Located in suburban area surrounded by buildings and trees	
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)		
n/a		
Vent. Cooling Architectural Design Elements (Form, Morphology, Envelope, Construction & Material)		
<p>Form: One storey square building with a pyramid shaped roof</p> <p>Morphology: Offices, canteen, toilets etc. are all placed around the common room, which is placed in the core of the building. At least one window is placed in each room, which secures sufficient amount of daylight and makes natural ventilation possible. In some of the bigger rooms and in the common room skylight windows are added, to make stack ventilation possible. The total area of the building is 400m², from which 375m² are naturally ventilated after the renovation.</p> <p>Envelope: The location of the façade windows and skylights are designed to facilitate the performance of the natural ventilation.</p> <p>Construction: Heavy mass building</p>		
Vent. Cooling Technical Components (Airflow Guiding Components, Airflow Enhancing Components, Passive Cooling Components)		
Stack ventilation by automatic controlled window openings is the main ventilation principle in the building.		

IEA EBC Annex 62 Ventilative Cooling

Actuators, Sensors and Control Strategies
<p>CO2 level and temperature sensors are positioned in each zone. Weather station measuring wind speed/direction, rain, temperature and humidity is placed on the rooftop. Besides the automatic control, manual window control is also possible. 30 min after the manual control has been used for the last time the windows are switched back to automatic control. Natural ventilation is controlled by NV Comfort™ system</p>
Building Energy Systems (Heating, Ventilation, Cooling, Electricity)
<p>District heating Information about electrical system is not available.</p>
Building Ownership and Building Facility Management Structures
<p>Scion DTU owns the building. The building is rented out to different companies</p>
Acknowledgements
<p>n/a</p>
<p>Datasheet Source: WindowMaster A/S © 2/2 All images and copyrights belong to the original owners and are reproduced for the purpose of training and education only</p>