

## DK\_Stuer\_Bang & Olufsen Headquarters

**Image 01:**

East view  
 © Bang & Olufsen



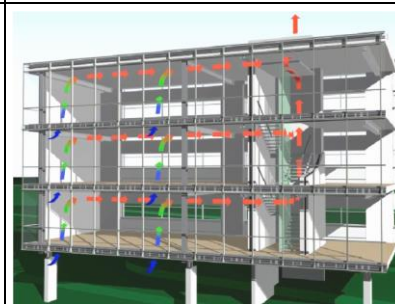
**Image 02:**

View of southern façade  
 © Ralf Skjærning



**Image 03:**

North view  
 © Birch & Krogboe A/S



### Building Specifications

<b>Address</b>	Peter Bangs Vej 15, DK-7600, Struer, Denmark
<b>Building Category</b>	Office
<b>Year of Construction</b>	1998
<b>Special Qualities</b>	n/a
<b>Location</b>	56° northern latitude, 9° eastern longitude, located in flat land. Adjoining land plot in north direction is covered with industrial buildings, in west – residential buildings, south – land fields and east – land fields and Venø bay
<b>Climate</b>	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)

Form: Long, horizontally stretched three-story box shaped building.  
 Morphology: The office layout is designed based on an open plan principle. Total floor area is 1.680m<sup>2</sup>  
 Envelope: East and North facades of the building consist of insulated concrete inner and brick outer leaf walls. The south façade has a moderate window area for daylight. The north façade is fully glazed.  
 Construction: Pre-casted concrete elements, heavy thermal mass building

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

Hybrid fan assistance ventilation. The air in the rooms is distributed according to displacement ventilation principle. Outdoor air is supplied through automated window ventilation openings located along each floor. Ventilation air is extracted from the building through specially designed cowls located above staircases on top of the roof.

## IEA EBC Annex 62 Ventilative Cooling

<b>Actuators, Sensors and Control Strategies</b>
<p>Chain actuators operate façade windows, ventilation openings and roof openings.</p> <p>South side windows are user-controlled during the day and automatically controlled during the night when night cooling is activated.</p> <p>The ventilation system is demand controlled either by CO2 level or room temperature.</p> <p>Assisting fans for hybrid ventilation are frequency controlled from 0-900 rpm.</p> <p>The building is controlled by centralized BEMS system.</p>
<b>Building Energy Systems</b> (Heating, Ventilation, Cooling, Electricity)
<p>Heating is provided with a combined heat and power plant with a natural gas fired engine.</p> <p>Space heating is ensured with radiators located on the south façade.</p>
<b>Building Ownership and Building Facility Management Structures</b>
<p>The owners occupy the building.</p> <p>Architect: KHR Arkitekt A/S</p> <p>Consultants: Birch &amp; Krogboe A/S</p>
<b>Acknowledgements</b>
n/a
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