

Object name

Oxtorget, Värnamo**Sweden**

Object photo



Object description

At Oxtorget in the centre of the town Värnamo, five multifamily houses were built with passive house standard. The client Finnvedsbostäder is the public housing company in Värnamo. The five houses consist of 40 rental apartments with 2 to 5 rooms in each apartment. The tenants moved in during June – July 2006.

The loadbearing structure is made of concrete and cast on site. The external wooden frame walls are also put together on site.

Every apartment has its own small ventilation system with an air-to-air heat exchanger. Additional heat is supplied by electric resistance heating in the supply air. An active solar system was installed on the roof, 25 m² on each building with an estimated solar fraction of 50%. An electric heating battery gives additional heat when the solar system is unable to meet the domestic hot water demand.

Ref: Passive houses in Sweden, Experiences from design and construction phase, Ulla Janson, Division of Energy and Building Design, Department of Architecture and Built Environment, Lund University, Faculty of Engineering LTH, 2008, Report EBD-T--08/9

Fact sheet

Apartment house in Värnamo

Treated Floor Area	598 m ²
Number of apartments	40
Completion date	2006

Energy standard

Heat requirement / year (20/22°C)	9,8 / 12,8 kWh/m ² a
Heat load (20/22°C)	8,3 / 9,1 W/m ²
Primary energy requ.	not calculated
Air-tightness (n ₅₀ -value)	0,29 1/h

Building type

U-value

Exterior wall	0,095 W/m ² K
Roof	0,07 W/m ² K
Basement floor /	0,09 W/m ² K
Floor slab	W/m ² K
Windows / average	0,94 W/m ² K

Specification ventilation system

Mechanical ventilation with one air to air heat exchanger ($\eta \sim 0.85$) in each apartment

Heating installation

Electricity and for DHW generation solar collectors (25 m ² */building)	
Construction costs	1800 Euro/m ²

Building owner

Finnvedsbostäder AB

Architect/Planner

bsv arkitekter & ingenjörer AB, Värnamo

Photo credits

Ulla Janson