

Object name

Portvakten**Sweden**

Object photo



Object description

Hyresbostäder Växjö AB has built 2 multi-family buildings with 8 floors and 64 dwellings in the block Portvakten, in Växjö. The 2 tower block are the highest building in Sweden with timber framework, and with passive house technology. The basement is built with concrete. In each dwelling there is an individual metering of electricity, and hot and cold water so that the individuals can affect their overall monthly cost. Estimated energy use for heating and hot water is 38 kWh/m² and year. Central heat exchanger with water battery is used, with district heating as additional heat. Also, sewage heat exchanger is installed. Other energy savings contrivances are energy-efficient elevator, lighting with low-energy bulb, additional heat from district heating and heat recovery from the wastewater. The buildings are also prepared for solar energy, which is should be possible in the future.

Isolation thickness:

walls:	385 mm
roof:	550 mm
floor over crawl space:	300 mm

Fact sheet

Multi-family house in Växjö

Treated Floor Area	- m ²
Number of apartments	64
Completion date	2009

Energy standard

[Swedish criteria incl. an indoor temp of 22°C]

Heat requirement / year	25 kWh/m ² a
Heat load	10 W/m ²
Primary energy requ.	- kWh/m ² a
Air-tightness (n ₅₀ -value)	0,0,15 1/h
Building type	massive timber

U-value

Exterior wall	- W/m ² K
Roof	- W/m ² K
Basement floor /	- W/m ² K
Floor slab	
Windows / average	1,00 W/m ² K

Specification ventilation system

Mechanical ventilation with a central plate heat exchanger

Heating installation

District heating and waterborne supply air heating battery

Construction costs - Euro/m²

Building owner

Hyresbostäder I Växjö AB

Architect/Planner

BSV Arkitekter & Ingenjörer AB

Photo credits

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