

Object name

Hamnhuset**Sweden**

Object photo



Object description

Hamnhuset i Gothenburg are 2 passive house buildings with 4-5 floors and have 115 rental dwellings with 1,5 to 4 rooms. Hamnhuset was projected in 2006 and are the Swedish first multi-family buildings that are that energy efficient it is heated by the residents' own bodies. The multi-family dwellings were ready for occupancy in the summer 2008. The initiative is part of the corporate commitment within the ByggaBo-dialog.

Solar collector cover the summer months need of hot water; 135 000 kWh/year. In the winter environmentally friendly electricity heating is used. LCC calculations estimate heating and hot water consumption to 28 kWh/m² and year, and electricity consumption to 29 kWh/m² and year.

The requirements for passive houses classification have been added after the Hamnhuset was built. Under the current terms of the classification, Hamnhuset do not meet the requirements for windows and air density. However, the dwellings have energy-efficient appliances, low flush taps, fans, carbon filters in the kitchen etc.

Isolation thickness:

walls:	315 mm
roof:	300-500 mm
floor above crawl space :	70 mm (garage in house)

Fact sheet

Multi-family in Göteborg

Treated Floor Area	- m ²
Number of apartments	115
Completion date	2008

Energy standard

[Swedish criteria incl. an indoor temp of 22°C]	
Heat requirement / year	27 kWh/m ² a
Heat load	10W/m ²
Primary energy requ.	- kWh/m ² a
Air-tightness (n ₅₀ -value)	0,26 1/h
Building type	Information

U-value

Exterior wall	- W/m ² K
Roof	- W/m ² K
Basement floor /	- W/m ² K
Floor slab	
Windows / average	1,10 W/m ² K

Specification ventilation system

Central mechanical ventilation with heat recovery

Heating installation

Preheating of supply air with district heating + additional electrical heating of supply air in each apartment
Construction costs - Euro/m²

Building owner

Älvstranden Utveckling AB

Architect/Planner

White Arkitekter

Photo credits

Passivhuscentrum

