

Object name

**Single family house Prague-West****Czech Republic**

Object photo



Object description

The house was designed with sloping roof, which was a regulation of newly settled area (the owner would prefer pitched green roof). The sloping of the roof is as minimal as it was acceptable for authorities. The style of the house is compact and severe.

The construction of the house was exactly made according to computer model, metal connections were minimized by means of tenon jointing and fantail joints. Extra building costs were compensated by accurate construction and thus lower consumed work. The blower-door test brought extraordinary result 0,21h-1.

The construction of the main house is timber with blown cellulose, the house which is above ground level is founded on a grid of concrete pillars on pad footing. The reasons for founding above ground are mostly the protection of wood against humidity with no need of water-proofing and also economical and ecological aspects. Such foundations are easily made, with less need of concrete and after the lifespan of a house is finished, it is easy to recycle them. The additional unheated facility rooms are founded classically on line footing.

Fact sheet

SFH Prague-West	
Treated Floor Area	189 m <sup>2</sup>
Number of apartments	1
Completion date	2008

**Energy standard [PHPP]**

Heat requirement / year	14,5 kWh/m <sup>2</sup> a
Heat load	13 W/m <sup>2</sup>
Primary energy requ.	90 kWh/m <sup>2</sup> a
Air-tightness (n <sub>50</sub> -value)	0,21 1/h
Building type	Timber construction

**U-value**

Exterior wall	0,1 W/m <sup>2</sup> K
Roof	0,09 W/m <sup>2</sup> K
Basement floor	0,11 W/m <sup>2</sup> K
Floor slab	
Windows / average	0,68 W/m <sup>2</sup> K

**Specification ventilation system**

Central system, air-to-air soil heat exchanger

**Heating installation**

Biomass, air-heating with circulation, solar collectors for DHW

Construction costs Euro/m<sup>2</sup>

**Architect/Planner**

Aleš Brotánek Design Studio

**Photo credits**

Aleš Brotánek