

Object name

**EPD Stupava****Slovakia**

Object photo



Object description

The first passive houses in Slovakia with air tightness under 0,6 1/h. It is a two storied single family house. It's main characteristic is the overall use of ecological building materials.

The Building envelope is wooden light construction with cellulose insulation. From the interior clay plaster and 16 t of "green" brick are used for accumulation and humidity regulation. The outside finish is untreated oak and plastered wooden fiber panels

A compact unit was for the first time applied in Slovakia combining the heating unit with ventilation and domestic hot water preparation. As pre-heating and pre-cooling a ground brine heat exchanger was also installed for the first time. The washing machine and dish washer are connected to the hot water supply to further lower the PE requirement

Fact sheet

Single family house in Stupava

Treated Floor Area	172 m <sup>2</sup>
Number of apartments	1
Completion date	2008

**Energy standard [PHPP]**

Heat requirement / year	15 kWh/m <sup>2</sup> a
Heat load	13 W/m <sup>2</sup>
Primary energy requ.	79 kWh/m <sup>2</sup> a
Air-tightness (n <sub>50</sub> -value)	0,46 1/h
Building type	Timber construction

**U-value**

Exterior wall	0,1 W/m <sup>2</sup> K
Roof	0,08 W/m <sup>2</sup> K
Basement floor /	0,135 W/m <sup>2</sup> K
Floor slab	
Windows / average	0,89 W/m <sup>2</sup> K

**Specification ventilation system**

Central System, Compact unit Drexel und Weiss: aerosmart XLS

**Heating installation**

Compact unit Drexel und Weiss: aerosmart XLS

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

**Building owner**

private

**Architect/Planner**

Kierulfová, Kierulf, Createrra, s.r.o.

**Photo credits**

Kierulfová, Kierulf, Createrra, s.r.o.