

Object name

**Single family house in Bergen**

**Germany**

Object photo



Object description

The single family house in Bergen (Bavaria) is built with a basement below the twin garage.

The building is a timber construction and all building materials are chosen under the aspect of their environmental compatibility.

A Compact Unit provides the heating with supply-air and also generates the hot water. The frost protection of the Compact Unit is realised with a brine-bearing subsoil heat exchanger.

For supporting the Compact Unit a wood-pellet fired oven is additionally built-in. The preparation for upgrading the building with photovoltaic panels is done.

Fact sheet

Single family house in 83346 / Bergen  
Treated Floor Area 164 m<sup>2</sup>  
Number of apartments 1  
Completion date 2006

#### Energy standard [PHPP]

Heat requirement / year 15 kWh/m<sup>2</sup>a  
Heat load --- W/m<sup>2</sup>  
Primary energy requ. 71 kWh/m<sup>2</sup>a  
Air-tightness (n<sub>50</sub>-value) 0,4 1/h  
Building type Timber construction

#### U-value

Exterior wall 0,113 W/m<sup>2</sup>K  
Roof 0,098 W/m<sup>2</sup>K  
Basement floor / Floor slab 0,100 W/m<sup>2</sup>K  
Windows / average 0,85 W/m<sup>2</sup>K

#### Specification ventilation system

Compact Unit with subsoil heat exchanger for frost protection

#### Heating installation

Compact Unit, wood-pellet oven

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

#### Building owner

private

#### Architect/Planner

Sabine Babl – BioPlan GmbH

#### Photo credits

Lebensraum Holz, Bad Aibling