

Sun House, Tyrol, Austria



Picture source: SIKO SOLAR GmbH

Architectural integration of solar thermal energy systems

Sun house, Tyrol, Austria

Single-family house with solar collectors integrated both in the roof and the façade

PROJECT

Sun houses are low energy houses which are using solar thermal energy as the primary heating system. The need for additionally heating can be covered by a log-wood heating system, tiled stove or heat pump.

The sun house in Tyrol is getting over 80% of the energy from the solar thermal collectors. The rest is produced by a wood gasification boiler. The needed electricity is covered by a photovoltaic installation on the roof.

The solar thermal collectors are integrated in the façade with 70° inclination and on the roof with 45° inclination. Both, solar thermal collectors and PV-modules, are south facing to gain the maximum yield



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Key figures

Collector area :	55 m ²
Heat store:	12 500 litre
Hot water tank:	250 litre
Solar yield:	app. 82% solar coverage, 301 kWh/m ² /year
Photovoltaic:	5 kWp
Energy ratio:	14 kWh/m ² /year, gross area

Features

Solar thermal collectors are integrated on the roof for a maximum yield in the summer and on the façade for a maximum yield in the winter.

The solar thermal collectors and the photovoltaic modules have been together perfectly adapted into the house.



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SOLAR COLLECTOR

Type:

SIKO INTEGRAL, flat plate collector

Dimensions: variable

Colour: variable

Certificates: Solar Keymark and Austria Solar

Read more: www.solar.at



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GALLERY



PHOTOS; SIKO SOLAR GmbH

- Built/completed:
2012
- Engineer:
SIKO SOLAR GmbH
- Location:
Tyrol, Austria
- Project period:
2009-2011
- Type of project:
Single-family house



- Read more : www.solar.at