

Row houses, Arnstein / Germany



Photo: SOLARFOCUS GmbH

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Low energy row houses with roof mounted solar collectors

PROJECT

The so-called *Arnsteiner Sonnenhäuser* ("sunhouses") is a terraced housing development with 20 low-energy houses. Part of the energy supply comes from a solar collector area of more than 210 m² through which water is heated and household heating is provided.

Furthermore, 95% of the space heat can be recovered through a controlled ventilation system. By using rainwater to flush the toilets, choosing ecologically friendly building materials, forgoing a basement and thus insulating the houses and taking other measures, further energy-saving and environmentally protective measures could be realized. The "sunhouses" were built collaboratively by the 20 builders in the framework of the promotional programme for experimental home building, thereby reducing acquisition and planning costs.

(ref:wikipedia)



Photo: SOLARFOCUS GmbH

Key figures

Solar collector area:	224 m ²
Heat store:	50 000 l + an additional ground store
Heat distribution:	water based floor heating and wall heating. controlled ventilation with heat recovery
Auxiliary heating:	Heat pump and small CHP driven by natural gas.

Solar collector

Stationary flat plate CPC S1 collector from SOLARFOCUS GmbH (Compound Parabolic Concentrating solar panels) - integrated into a small district heating system

Dimensions: 2.400 x 1.155 mm (2,8 m²) x 65 mm
Weight: 55 kg
Flow volume: 20-70 l/m²h

The CPC solar collectors are high efficiency solar panels. It comes with a 10 year warranty and is also guaranteed against condensation and corrosive air.



Photo: SOLARFOCUS GmbH

GALLERY



PHOTOS; SOLARFOCUS GmbH

- Built/Completion:
1998
- Client:
The owners of the buildings
- Architect:
Haase & Partner, Karlstadt
- Solar system:
SOLARFOCUS GmbH
www.solarfocus.at
- Address/Location:
Am Sonnenhügel
97450 Arnstein / Germany
- Type of project:
Multi-family house



- Read more: <http://www.oekologie-im-staedtebau.bayern.de/energie/doc/arnstein.pdf>