

PASSIVE HOUSE "Sonne 16"

Berlin, Germany



RESIDENTIAL

Apartment building

The building created by the "Sonne 16" housing project is a passive house that runs exclusively on solar energy. This means that the building envelope and the building services are high grade to the extent that insulation covers almost the entire heat demand directly via the walls and large south-facing window, as well as indirectly via the DHW heating system. This pioneering energy concept from IMMOSOLAR is based on combining heat source, solar thermal collectors and a brine/water heat pump with 17 kW output. The DHW demand is largely covered by a solar thermal system with 32 m² collector area. Washing machines too are supplied with solar energy via a DHW connection, which reduces costs even more. This is precisely the point of this future-proof apartment building: the energy concept based on the optimum utilisation of solar energy keeps operating costs low in the long term. And then there is the question of the comfort and convenience of the residents of the "Sonne 16" passive house. Combining the particularly high grade thermal insulation, ventilation and underfloor heating makes for a very pleasant atmosphere inside this apartment building.



Project data

Object type	Apartment building
Year of construction:	2011
Gross floor area (GFA):	1170 m ²
Apartments:	9
System:	Heat pump and solar thermal system
Use:	Heating, DHW
Main components:	Brine/water heat pump IS-SW 17 kW, collectors 32 m ² - 16 x IS-PRO 2H, EnergyController, geothermal probes
Specialties:	Intelligent utilisation of solar heat through an EnergyManagementSystem
Energy savings per year:	44,500 kWh/year
Reduction in CO ₂ emissions per year:	7,500 kg CO ₂ /year
Regenerative portion of energy demand:	81 %