

# Solar Tube



Gallery





## Question

Why not a "solar tube"?



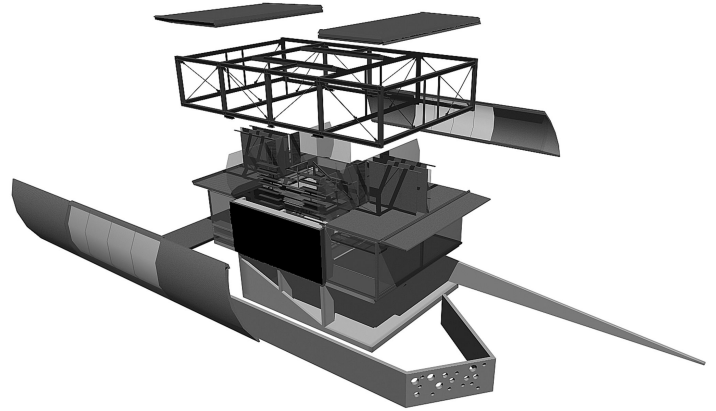
## Solution

A solar tube in general is a small light-and-heat captor which is usually installed on the roofs of houses. In this case, the entire house serves as a collector, opening to light-and-heat on all sides. The wooded site has enabled the architect to use generously glazed elevations, which are sloping or curved in various parts. Since the roof and floors are also partly transparent, the core of the house works like an integrated atrium. As for the glass "tube" that forms the uppermost level, it helps to cut heating costs in winter. Apart from its energy-saving virtues, glass also offers intimacy with the surrounding nature. Therefore one gets the feeling of living in a tree-house. It's a symbiosis between nature and architecture.

Solar Tube was built in only 5 months, from April till August 2001. This fast construction was possible due to the usage of mostly prefabricated or in-stock units and base materials.

Custom designed and manufactured elements do not necessarily produce better results. At the same time, choosing an alternative solution saves a lot of money, energy and time. We have always been supporters of fast and efficient constructions.

Overheating in summer is avoided by the trees as well as by a special ventilation system that works like a chimney. In winter the heating costs can be cut to a minimum because of the compact coat of the building. It is designed in a way of absorption and reflection, what allows a high amount of sun energy to be used. On the other hand of course the defoliated trees in winter let the sunlight shine through the glazed facade and roof and therefore also help cutting the heating costs.



## Design and functionality

Seeing Solar Tube from the street is an experience on its own. People are attracted by the remarkable shape of the house as well as by the glass facade, although the facade facing the street is more closed (compared to the sides in direction of the garden) to give the inhabitants more intimacy.

The integrated atrium that builds the core of the house is open to all sides. Even from the ground level one can see through to the sliding roof.

This is possible due to the partly transparent floors on one hand and on the other due to the fact that the bedrooms in the uppermost level are reachable over a gallery. The interior is also characterized by the spirit of "open living". All of the integrated furniture (kitchen, library, integrated cupboards, bathrooms, etc.) was designed by our office and therefore fits in perfect harmony to the design of the building itself.



## Info

Category  
Private Home

Details  
site: 1.300m<sup>2</sup>  
net floor area: 308m<sup>2</sup>

Copyright  
driendl\*architects ZT GmbH

City  
Vienna

Commissioner  
private

Period  
2000–2001

Type  
direct

Status  
built