



**HEATING AND COOLING WITH
SUNLIGHT AND AIR!**

The SolEP ppp Cube:

The SolEP ppp project uses a new way of packaging proven technology. It provides a modern alternative to heating and cooling technology for homes and other buildings with little interference with the building's existing infrastructure.

Factory-based pre-assembly keeps installation work on site to a minimum. The ppp system connects to existing central heating circuits with very little effort and adaptation.

Of course, new buildings can also benefit from the heating and cooling power of the SolEP ppp Cube, especially as they will no longer need to reserve space for a boiler room.

The SolEP ppp Cube is also suitable for installation on flat roofs or for architectural integration in other structures if permitted by structural codes.

Philosophy:

„The sun doesn't send us a bill“, wrote television journalist Franz Alt in his 2012 book of the same name. Renewable energy technology has significantly improved in the past decade, and allows us to package proven technology in a simple, cost effective method.

CO2 reduction and „peak oil“, climate change and alternative energy, and even the Fourth Revolution are terms we hear in the media nearly every day. The time is ripe to get to the point – or, better still, to the „Cube“.

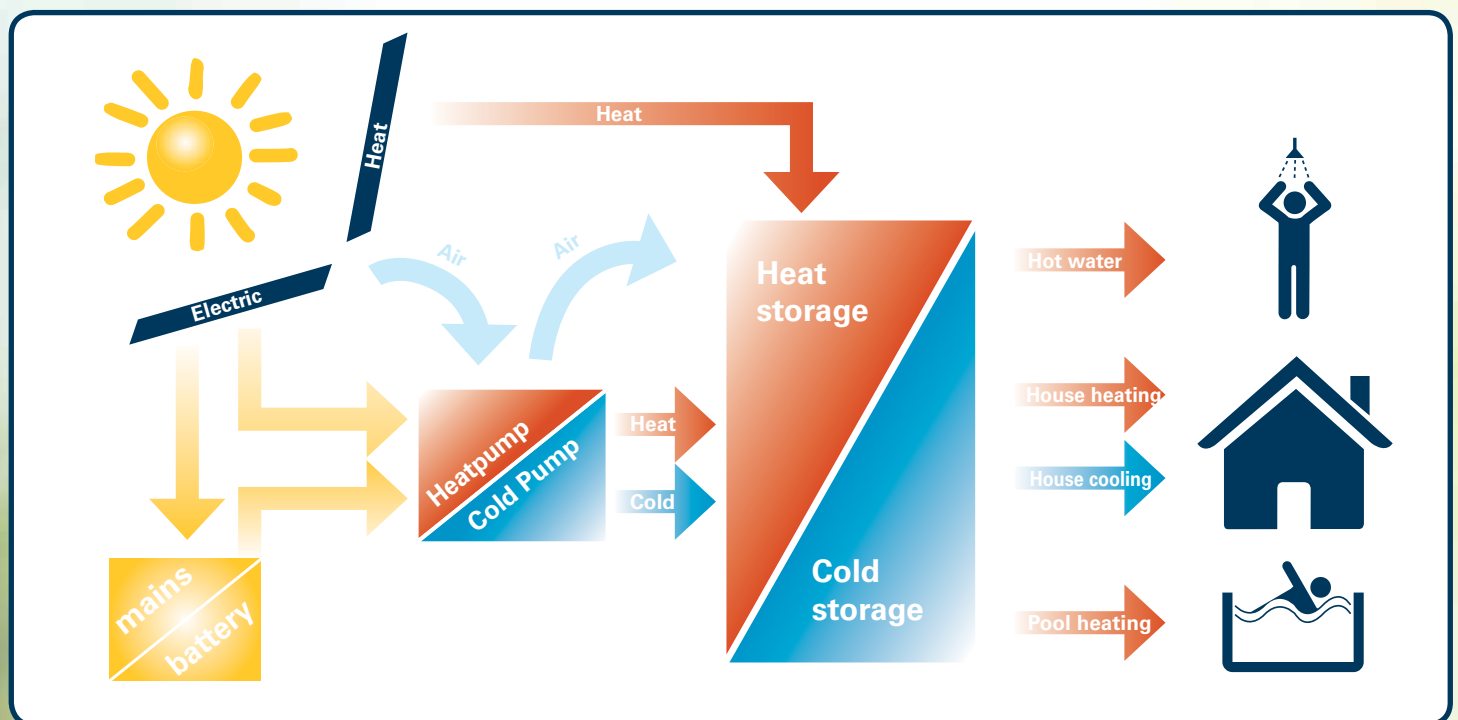
Technology:

The SolEP ppp Cube uses an engineered combination of photovoltaic system, heat pump, energy storage technology and state of the art solar thermal power. The entire system is controlled by innovative energy management. Every component inside the Cube is ready to run and checked for proper functionality.

The photovoltaic system and the thermal solar energy plant use the energy provided by the sun and the air, either directly or by means of an air heat pump, to store heated and cooled water in a highly efficient „Twinload“ energy storage system. The system's intelligent energy management system detects when a sufficient amount of energy is available from the sun and the air and uses it to charge up the energy store to full capacity.

If little or no sunlight is available to power the cube, the system automatically reduces the consumption of its components – it switches to „energy-saving“ mode and draws power either from the national grid or from an alternative source of stored energy (e.g. a battery). If the photovoltaic system is not required to produce power for heating or cooling, any excess power is fed back into the grid or used to charge the battery.

How it works:



Design and materials:

The SolEP ppp Cube blends in inconspicuously with existing urban structures and is designed as „garden furniture“ from an architectural viewpoint. The supporting structure is made of cross-laminated timber, a sustainable raw material. ED cross-laminated timber consists of a minimum of 3 and a maximum of 11 cross-laminated layers

with a general symmetrical structure. These solid timber elements are mainly used for the walls, ceilings or roofs in modern timber buildings.

They are glued with a PUR adhesive made by Purbond. The glue is free from solvents and formaldehyde and is certified for the production of load-bearing timber construction elements for in-

terior and exterior use. The solid timber elements are precision-engineered to the exact millimetre.

The outer shell of the SolEP ppp Cube is made from 100% water-proof, recycled PU elements. This material is also formaldehyde-free and breathable, i.e. permeable to water vapour, and 100% recyclable. The Cube can be left in its natural state or painted in any colour of your choice.

...because green energy makes sense...

