

Building blocks for your ideas



MINERGIE[®]



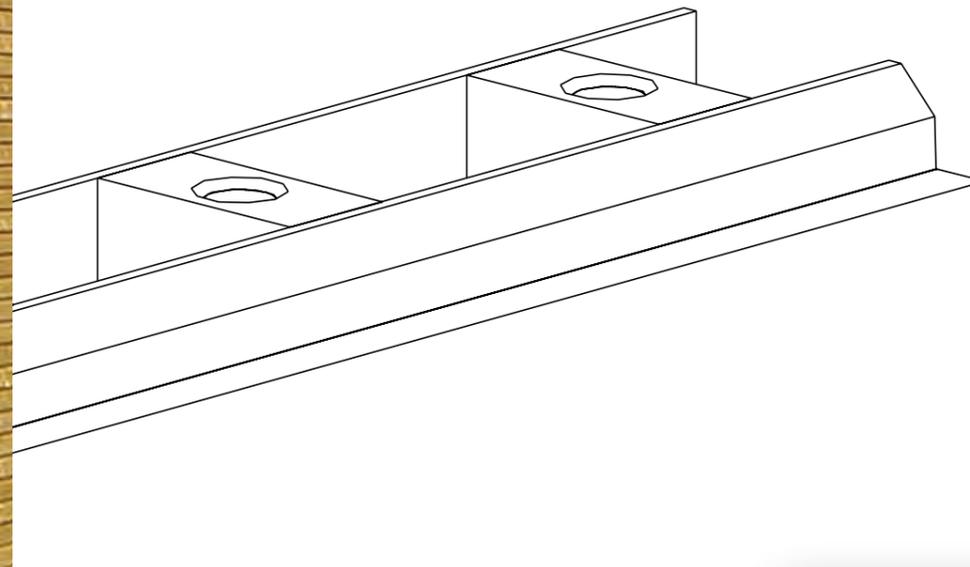
More information



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New building – new thinking

Increasing numbers of people want to build and live differently. They want good, solid houses with high residential quality and sensible prime costs and maintenance costs. But they also want to build in a way which is not detrimental either to their own quality of life or to the options of future generations – in other words in a considerate and sustainable manner. This new type of building has a future. It combines renewable resources with modern technology and brings economy and ecology together. Steko is showing how building can be different and can be better: simpler, more cost-efficient, healthier and more environmentally friendly, and yet still be a high quality. Steko is a building block system using the most up-to-date technology and construction, which enables sustainable building and meets the highest requirements in terms of stability, durability, comfort and freedom of design. Steko is a building system which opens up entirely new dimensions for building owners, planners and companies – it has never been this easy to build simple, solid, healthy and ecologically valuable houses.



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From an old wish to a new idea: new building needs new thinking.

The Steko centrepiece

The centrepiece of the Steko wall system is a wood module which can be easily put together in layers to form complete walls. The individual modules are coupled together by means of a special adhesive bond, creating an optimal connection between the corners and the partition wall connections. Specific end, lintel and underbeam elements for various openings facilitate the construction of the wall. Utricular connections can be guided into the hollow chambers of the Steko module. The subsequent insulation of these hollow chambers ensures effective heat insulation. The additional external insulation also improves heat protection and makes the system suitable for the construction of minimum energy, low energy and passive houses.



Type of wood	Spruce or fir
Wood moisture	10–12%
Adhesive	PU adhesive, emission-free
Wall thickness	160 mm (raw construction)
Weight/module	max. 6.5 kg
Raw thickness	280 kg/m ³

The Steko system

Using the standard modules, even rectangular corner and partition wall connections are possible. Angles other than 90° can be created by cutting with a saw. The range of completed Steko building blocks (sills, modules, integrators and opening connections) results in a simple wall construction with a few standardised parts. The external and internal walls, which can be built quickly and without any specialist lifting tools, both support and create space, generate simple wall connections, enable the integration of utricular connections and offer space for the heat and sound insulation.



The Steko basic module

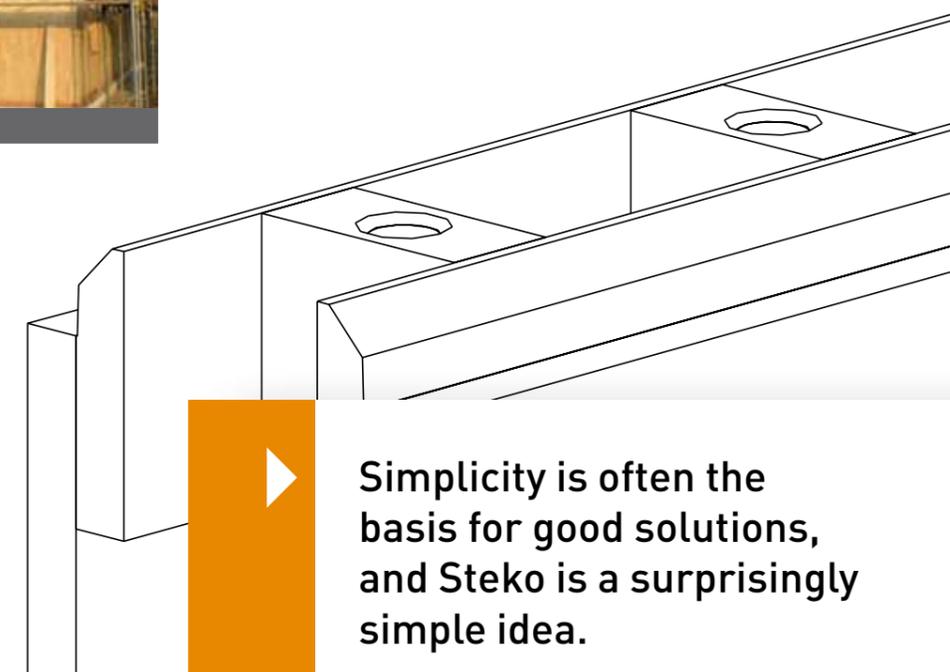


Steko wall construction



The Steko house

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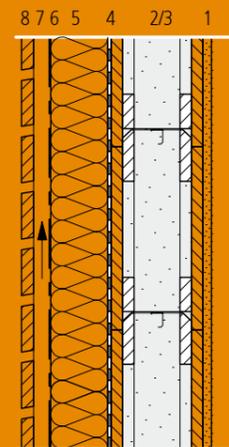
Simplicity is often the basis for good solutions, and Steko is a surprisingly simple idea.

Steko wall construction

Walls built using Steko are like your second skin. Thanks to the high proportion of dry, solid wood and natural insulation, they are breathable and permeable. In contrast to conventional constructions, Steko walls do not require moisture barriers, sealing strips or barrier foils, and therefore promote the natural climate balance in both summer and winter. Temperature and moisture regulation is carried out through the pores and cells of the solid wood like in human skin. In the winter, the solid wood Steko wall stores heat, and in summer it keeps the inside comfortably cool. When combined with the excellent insulation characteristics it results in an incomparably pleasant and healthy living environment. The walls feel pleasantly warm and there is a cosy living environment with no unpleasant building moisture which you can often sense for years after construction. The Steko modules are made of pure solid wood, and the Steko wall construction is designed so that no wood protection is needed – even this plays an important role in the wellbeing of those who live there.

Wall construction examples

Back-ventilated wall

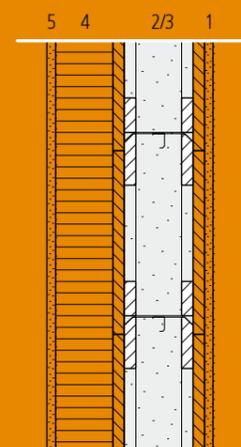


Construction from inside to outside

- 1 Gypsum fibre board or gypsum plasterboard
- 2 Steko wall
- 3 Cellulose fibre
- 4 Permeable air tightness layer ($sD < 0.12 \text{ m}$)
- 5 Heat insulation mineral fibre board $D = 0.035 \text{ W/m}^2\text{K}$
 $\rho > 60 \text{ kg/m}^3$ and $d_0 = 0.035 \text{ W/m}^2\text{K}$, with slatted frame
- 6 any insulation layer
- 7 Back-ventilation area
- 8 Façade formwork

Insulation thickness	U-value	Building standard	Wall thickness
40 mm	0.30 W/m ² K		270 mm
60 mm	0.27 W/m ² K		290 mm
80 mm	0.24 W/m ² K		310 mm
100 mm	0.22 W/m ² K		330 mm
120 mm	0.20 W/m ² K		350 mm
140 mm	0.18 W/m ² K		370 mm
160 mm	0.17 W/m ² K		390 mm
180 mm	0.16 W/m ² K		410 mm
200 mm	0.15 W/m ² K	Minergy-P	430 mm
250 mm	0.10 W/m ² K	Minergy-P/passive house	480 mm

Plastered external wall



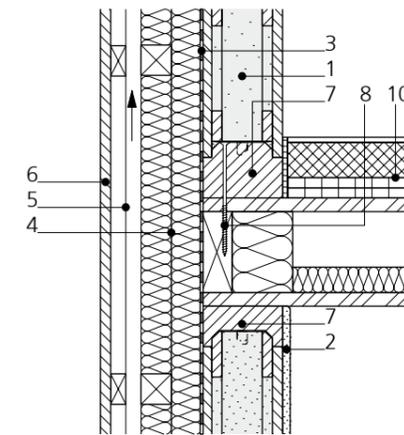
Construction from inside to outside

- 1 Gypsum fibre board or gypsum plasterboard
- 2 Steko wall
- 3 Cellulose fibre
- 4 Heat insulation/plaster base for mineral fibre board
 $D = 0.035 \text{ W/m}^2\text{K}$
- 5 Permeable outer plaster layer

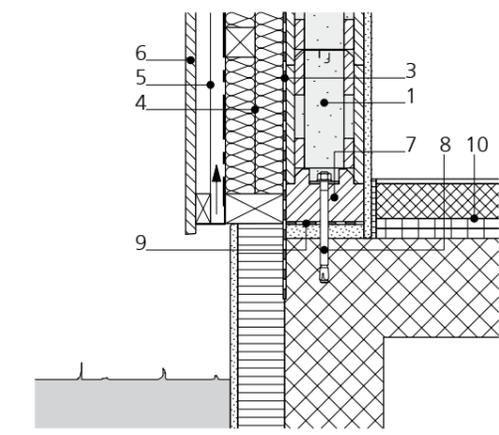
Insulation thickness	U-value	Building standard	Wall thickness
40 mm	0.27 W/m ² K		230 mm
60 mm	0.23 W/m ² K		250 mm
80 mm	0.21 W/m ² K		270 mm
100 mm	0.18 W/m ² K		290 mm
120 mm	0.17 W/m ² K		310 mm
140 mm	0.15 W/m ² K	Minergy	330 mm
160 mm	0.14 W/m ² K	Minergy	350 mm
180 mm	0.13 W/m ² K	Minergy	370 mm
200 mm	0.12 W/m ² K	Minergy-P	390 mm
220 mm	0.10 W/m ² K	Minergy-P/passive house	410 mm

Vertical section example

External wall



Base



- 1 Supporting structure, modules, insulated chamber, installation area
- 2 Internal cover
- 3 Airtight layer
- 4 Insulation
- 5 Back-ventilation

- 6 External cover
- 7 Sills, integrators, connecting pieces
- 8 Connection, anchorage
- 9 Mortar bed, sealing, barrier layer
- 10 Floor construction

Why you can rely on Steko:

- ✓ nothing but wood – ecological and sustainable
- ✓ simple construction made easy
- ✓ a complete system
- ✓ energy efficient up to the Minergy-P level
- ✓ pleasant living environment – pure nature

Good building needs precision and teamwork. Steko makes building more efficient.

References



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