

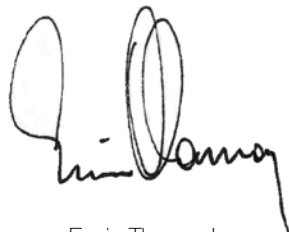


A sense of well-being

Can a house be the fuel for health and well-being?

People increasingly want their home to be an oasis of health and well-being. At Thoma, we are working towards this on their behalf. For over 20 years we have had this as our vision and today can share many successful examples of our work. A new era of quality wood construction was heralded by the invention of Wood100 by Thoma. With its non-glued solid wood shell, a Wood100 house has impressive results (and a few world records) in heat insulation, air-conditioning, energy savings, indoor air-quality, soundproofing, protection from radiowaves, fire protection and earthquake security. The patented Thoma Wood100 construction method wraps the home's inhabitants in pure solid wood with no chemical pollutants. This combines both state-of-the-art thinking with enduring natural characteristics of wood at its finest. The powerful testimonials from thousands of happy Wood100 customers are our best advertisement.

Enjoy the contents of this brochure – it explains the benefits in detail and how to progress plans to design and build a Wood100 home.



Erwin Thoma, Ing.



Our aim:

To build the healthiest house in the world – with the highest standards of build.

Our solution:

Thoma Wood100 – a solid, no glue, no chemical solid wood shell. A pure wood surround with no additional pollutants.

Our Path:

From a small innovative company to Europe's leading quality wood construction business in just 20 years.

Your benefit:

The healthiest house in the world.

The idea behind Wood100

What lies behind our product?

- An appreciation of the standard of ancient buildings constructed of solid wood
- A strong environmental concern for cradle to cradle building
- Our mission to build the healthiest home possible

There are temples in Japan over 1600 years old constructed of wood with wooden peg connectors. These buildings have outlasted storms and earthquakes proving the effectiveness of wood to wood connections and solid wood construction. Thoma Wood100 is such a solid wood construction system.

All wood used in a Wood100 home is harvested from sustainable forests. The trees are cut during sap rest periods in the correct lunar phase, a tradition dating back thousands of years, which preserves wood against mould and insects. Wood100 is an example of cradle to cradle in its purest form. The wood in a Wood100 home is always clean wood – a valuable material for generations to come. It can be un-assembled, reused for other applications, or as fuel or compost at the end of its useful life, without any environmental consequences.

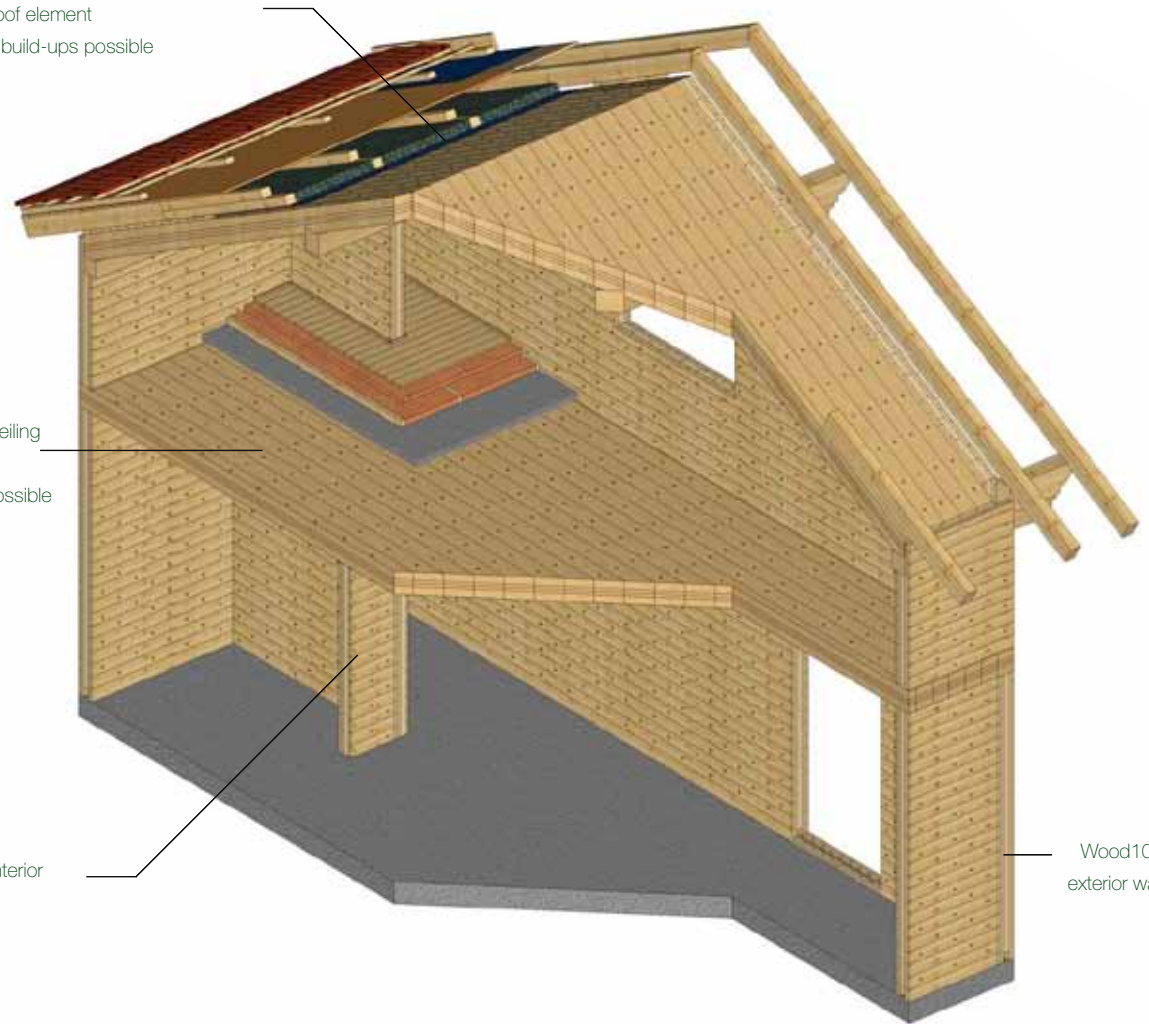
Homes can be prone to noise pollution, fire, radiation pollution, earthquake, flood, mould, unhealthy air quality and inefficient insulation. Instead of pollution filled chemicals and adhesives, our houses are made as a solid wood shell. Layers of wood connected with wooden pegs are assembled into solid wood panels designed for interior walls, floors and ceilings, roof structures and exterior walls. The resulting indestructible solid wooden blocks are highly water resistant and perform better than other construction methods in heat insulation, fire security, radiation shielding, earthquake safety and have 100% protection against condensation and mould growth.

Wood100 roof element
various roof build-ups possible

Wood100 ceiling
various floor
build-ups possible

Wood100 interior
wall

Wood100
exterior wall



Your Health

Did you know that it has been scientifically proven that you sleep deeper and sounder in solid wood rooms? It has also been proven that the heart beats more slowly if you sleep in a solid wood rather than artificial surrounding.

Solid wood is a blessing for anyone with allergies and for everyone who wants to breathe freely in their own home. Wood100's glue and chemical free promise ensures these health benefits. Letters of gratitude from people whose health has improved in our homes fill entire folders at Thoma. Wood100 hotels are consistently booked. A real sense of well-being is derived when surrounded by pure unpolluted wood with no glues or chemicals.



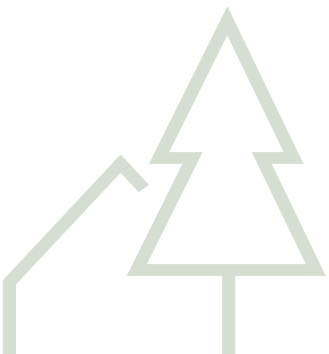
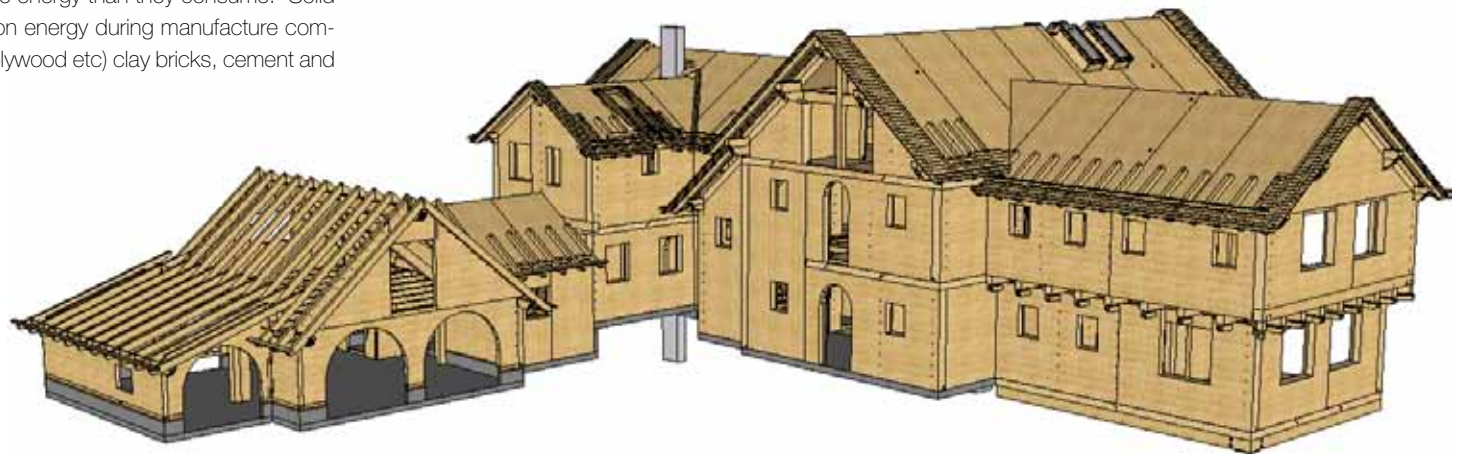
The technical data

In addition to the many health and well-being benefits from Wood100, we can demonstrate hard facts relating to insulation and energy efficiency.

The Wood100 solid wood home has the world record for heat insulation in structural materials and therefore minimal operating costs. Energy price increases are less of a worry to Wood100 homeowners. Recent tests of 3 wall systems with the same R-value showed the supremacy of Wood100. With the inside temperature set to 21C and the outside at -10C the heat was turned off inside the building and the researchers waited to see how long it took for the inside to fall to 0C. The 'passive' house standard stick-frame wall home took 41 hours. The home with brick wall and insulation took 259 hours and the Wood100 home took 777 hours. The conclusion is that an average Wood100 home needs 1/3 of the heating system compared to a traditional framed home with the same R value. There are homes built by Wood100 that have no heating system at all. Rather they are passive solar, the heat emanating from the people in the home, the appliances in the home and the thermal mass of the wood.

It's like having air-conditioning and heating systems with zero energy consumption. In the summer the home stays cool and in the winter it stays warm.

The Wood100 factory and head office in Austria produce more energy than they consume. Solid wood processed without glue uses a fraction of the production energy during manufacture compared with chemically processed wood (including OSB, CLT, plywood etc) clay bricks, cement and reinforced concrete.



Wood100 house with log casing – here old log home frailties like subsidence and draughts are no longer an issue. High-tech wood in a traditional appearance.





The Filmarchiv Austria manages the largest film collection in the country at its facility in Laxenburg, near Vienna. It is the first film archive in the world made completely of wood from local, sustainable forests and featuring solar-powered climate control.

Protection from the elements

Wood100 homes have withstood fires, flooding and earthquakes. The homes have top fire protection values as the solid blocks of wood do not burn but simply char on the outer surface. Ceilings in Wood100 homes perform better than concrete and steel against fire. The wood contains no materials which are destroyed by water. The solid block remains elastic and pliable through earthquakes. The solid wood shields the inside of the home from high-frequency radiation and it can demonstrate more soundproofing than man-made materials due to the mass of solid wood.

The brilliant simplicity of nature delivers these benefits.



Wood100 is also available as contemporary modular construction making it expandable and mobile at any point in the future.



What does a Wood100 home look like?

A Wood100 home can be built in any architectural style possible inside and out, design possibilities are limited only by our imagination. From the polar circle to the Mediterranean, from Tokyo to San Francisco, passive houses and farmyards, garden houses and high end villas, stables and a king's residence, schools, kindergartens and fascinating wooden hotels to houses which become cozy and warm with a couple of logs on the fire when it's minus 40C outside. This sustainable building with 100% wood has no limits.

Contemporary cabin



Wellness retreat on the lake



Wood100 home from the hand of the internationally renowned architect OLK – Oskar Leo Kaufmann.





Example of a Wood100 Alpine style home with unbelievably low annual energy consumption.



Wood100 interior view



Wood100 interior view



Wood100 interior view



Well-being in the Thoma hotels





These hotels, built to Wood100 standards, have year round occupancy rates of 90% - far above the industry average. The best compliment for the sense of well-being, atmosphere and quality of sleep in our hotels is the high number of repeat customers. We know of no other construction method which can claim this.



Wood100 Hotel Urthaler on the Seiseralm. Solid wood and state-of-the-art interior design by the famous architect Ingo Maurer. (www.seiseralm.com)



The solid wood panels are constructed off-site. When the site is ready they are delivered and assembled in as little as one day. That saves construction time and money. It's also reassuring when our unfavourable weather makes it imperative to seal and protect the home as quickly as possible.



Awards and Certificates



Our awards

- ☐ ISO9001 quality certificate
- ☐ German Wood Creative Award 2000
- ☐ Salzburg Innovation Award 2000
- ☐ Environmental Award of the Industry 2001
(most environmentally friendly business in Austria)
- ☐ Rio Innovation Award 2003
- ☐ Women-friendly business
- ☐ Research Promotion Fund and Labour Chamber Award

Our certificates

- ☐ Fraunhofer Institute Stuttgart (heat insulation)
- ☐ Bundeswehr University Munich (radiation shielding)
- ☐ Vienna Technical University (engineering)
- ☐ Graz Technical University
(airborne sound, draught, heat transfer)
- ☐ MA 39 Vienna (sound absorption)
- ☐ University (TH) Karlsruhe (engineering)
- ☐ Graz Technical University (sound insulation, cooling duration)
- ☐ Institute for Fire Protection and Safety Technology Linz (fire safety)
- ☐ Certified Gold from the Cradle to Cradle Products Innovation Institute 2013
- ☐ 2009 PEFC Chain of Custody certificate (sustainable forest management)

Sustainability and Wood Harvesting



Thoma only buys wood from forests certified as FSC (Forest Stewardship Council).

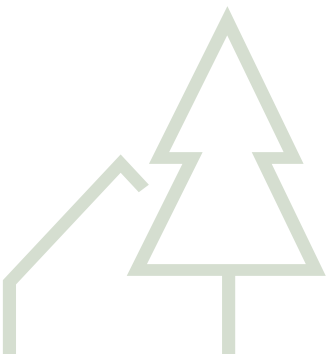
The material used in Wood100 construction is called "moon-wood", which refers to the lunar phase in which it's harvested. It's sometimes seen as rural folk-lore that dates back thousands of years, but has recently been scientifically proven through the work of Dr. Ernst Zucher in Switzerland.

Such harvesting is an ancient method of preserving timber by cutting wood according to the phases of the moon. Like the tides of the ocean the moon also influences the rise and fall of the sap in a tree. The wood is cut in the autumn and winter months when trees are hibernating. During these months the sap in the tree is at its lowest in the days before the new moon. Harvesting at this crucial time is a simple and natural way of protecting the wood from insect and fungus, thus increasing its durability.

The trees are left to dry in the forest with their bark, the crown of the tree, and a few side branches with needles left intact. This reduces the amount of cracking & warping that occurs as the timber dries out. By propping the stem up and drying with branches and bark, the gravity helps the tree to pull the last traces of sap to its branches.

Benefits

- ☐ Superior quality
- ☐ No infestation of insects
- ☐ Less cracking, splitting or warping of wood
- ☐ No toxic wood preservatives needed
- ☐ Longer durability
- ☐ Lower carbon footprint
- ☐ Extracting lighter timber uses less diesel

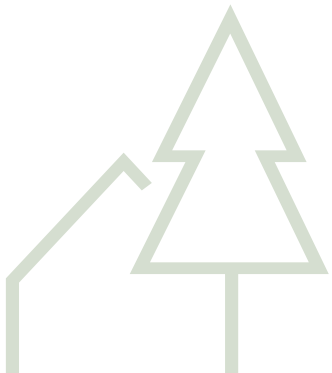




An example of just how modern a Wood100 home design can be.

Summary of benefits of Thoma Wood100

Healthy living	Breathe freely and easily through use of no poisonous chemicals. A deep and restful sleep.
Comfort	Natural moisture and climate regulation – a natural air conditioner and ventilation system.
Heat insulation	World record for heat insulation values in any structural component.
Cooling duration	The thermal mass means an extremely long cooling duration in winter.
Moon wood	Superior quality and durability.
Costs	Minimal operating costs due to energy efficiency from thermal mass, comparable costs in materials and reduced costs from construction time.
CO2 footprint	Building with pure wood is your contribution to minimizing greenhouse gas release.
Energy balance	Energy saving passive house values – your conscientious approach to the environment.
Installation time	Short construction periods to save costs and worry in inclement weather.
Radiation shielding	Best possible protection against high-frequency radiation for a healthier indoor environment.
Hypo-allergenic	Natural house dust reduction, mould resistant and chemical free makes the air suitable for allergy sufferers.
Noise protection	Best noise protection from the thermal mass of walls, floors and ceilings.
Protection from the elements	Top fire-protection values and security during earthquake, storm and floods.
Variety of styles	Suitable for modern, contemporary , traditional or rustic styles of building.



In line with our commitment to protect the environment,
we chose a FSC certified process to print this brochure.
Nature is our partner.



How to get your Wood100 house

Visit your local partner with your plans or thoughts. You will obtain ideas, suggestions and solutions. If you don't yet have a design, they can provide architectural solutions.

Visit our website www.thoma.at to obtain many more technical details and design ideas.

Your closest Wood100 partner

