



We build the healthiest, greenest living spaces in the world.



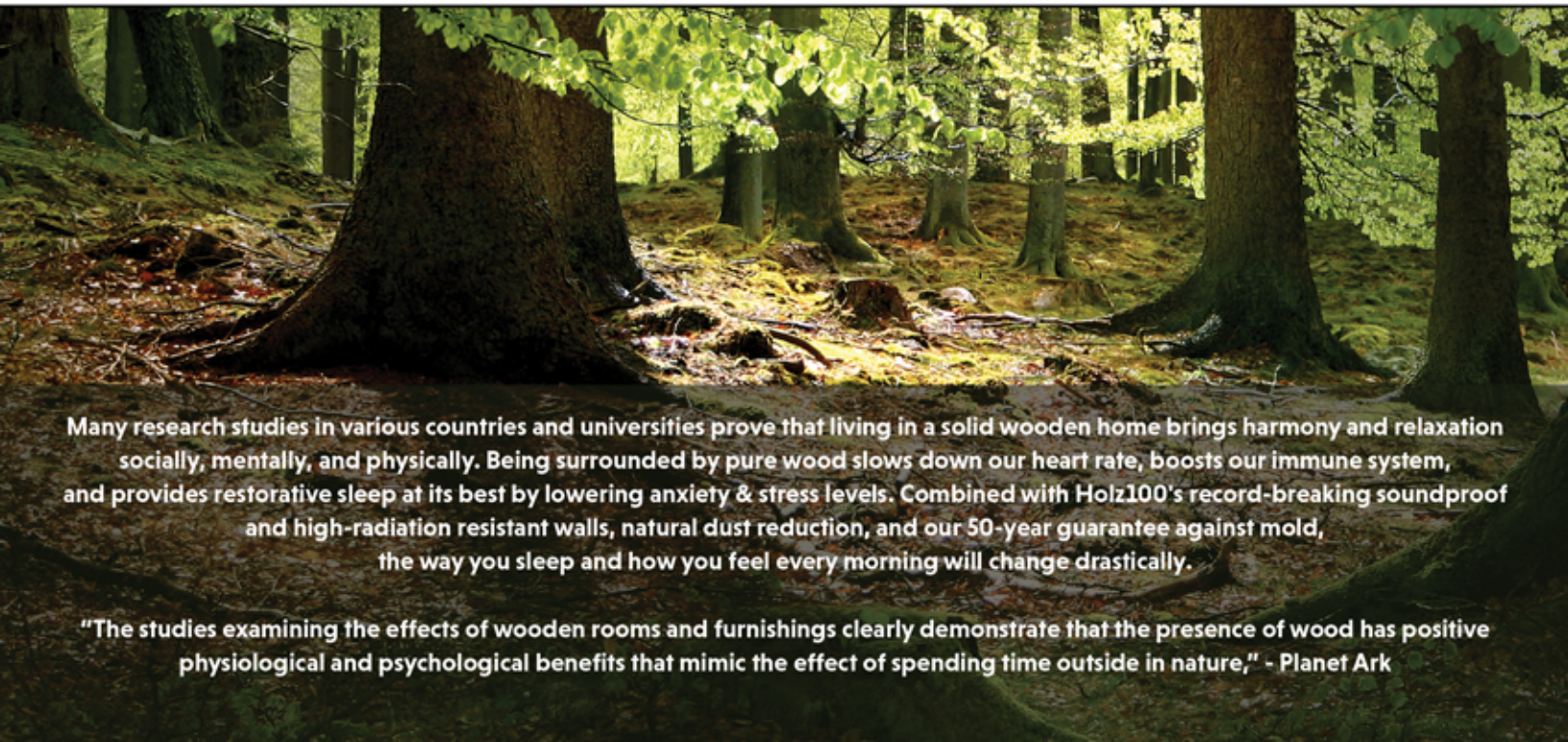
What is Thoma Holz100?

The patented Thoma Holz100 consists of layered wooden boards that are cross laminated horizontally, vertically and diagonally connected to a standing core with beech wood dowels. The mechanically compressed and dust-dried hardwood dowels are hydraulically pressed in, absorb additional ambient humidity, and swell up to connect non-detachably to surrounding wood.

Holz100 protects its inhabitants from indoor pollution, noise, high frequency radiation, fire, floods, and earthquakes in its non-glued, nail-less, prefabricated pure solid wooden frames with no VOC, preservatives, toxins, or chemical pollutants. Driven by our passion towards a green, sustainable, safe community, our prefabricated wooden frames create healthy living spaces.



WE ARE A PROUD ADVOCATE MEMBER OF LEED
AND THE FIRST BUILDING COMPONENT SYSTEM EVER TO RECEIVE A
GOLD CRADLE TO CRADLE CERTIFICATION.



Many research studies in various countries and universities prove that living in a solid wooden home brings harmony and relaxation socially, mentally, and physically. Being surrounded by pure wood slows down our heart rate, boosts our immune system, and provides restorative sleep at its best by lowering anxiety & stress levels. Combined with Holz100's record-breaking soundproof and high-radiation resistant walls, natural dust reduction, and our 50-year guarantee against mold, the way you sleep and how you feel every morning will change drastically.

"The studies examining the effects of wooden rooms and furnishings clearly demonstrate that the presence of wood has positive physiological and psychological benefits that mimic the effect of spending time outside in nature," - Planet Ark

INVENTOR & FOUNDER OF THOMA HOLZ100

Dr. Erwin Thoma

He is a doctor, founder, and an environmentalist - in his quest to establish a healthy home environment, Dr. Erwin Thoma developed and patented a building system which is made purely of untreated timber expected to last for many generations to come. Thoma Holz100 is the result of his passion to create the healthiest living spaces in the world and wealth of knowledge regarding trees, forests and wood.



Dr. Erwin Thoma & Frank Ghahremani



The building block of
our Holz100 wall system.

THOMA HOLZ100 IN NORTH AMERICA

Holz100 Canada is a newly established company based in Toronto, Ontario responsible for exclusively promoting and marketing Thoma's Holz100 in North America since late 2016. Featuring cross laminated wooden boards joined by beech wood dowels (NO glue, chemicals, or metal nails) makes it incomparable to anything else in the world. Driven by our passion towards a green, sustainable, safe community, our prefabricated wooden frames create healthy living spaces. A new era of quality wood construction combined with state-of-the-art engineering is now available in North America.

THE ULTIMATE HEALTH SOLUTION - HOLZ100

We spend more than 80% of our lives indoors where it is much more polluted than outdoors due to dust, toxins, glue/resins, paint, varnishes, stains, VOC, and other numerous materials used in a conventional home which are unquestionably proven to cause chronic health issues.

Live, work, and study in an environment that improves your health & life - choose Thoma Holz100.

BENEFITS OF THOMA HOLZ100

01. WORLD RECORD IN HEAT INSULATION

With the indoor temperature set to 21°C and outdoors at -10°C, the heating system was turned off to see how long it would take to fall down to 0°C:

STANDARD STICK-FRAME WALL HOME: 41 HOURS
BRICK WALL HOME WITH INSULATION: 259 HOURS
HOLZ100 HOME: 777 HOURS

To achieve a thermal rating of $U = 0.3 \text{ W/m}^2\text{K}$, which is the current European norm aspired to build without insulation, would have to use the following wall thicknesses:

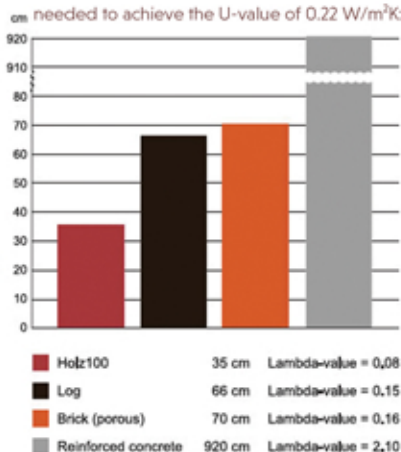
REINFORCED CONCRETE: 726 CM
AVERAGE BRICK: 60 CM
CONVENTIONAL TIMBER & GLUE-LAMINATED WOOD PRODUCTS: 47 CM
HOLZ100: 27CM

Conclusion: an average Holz100 home only needs 1/3 of the heating system compared to a traditionally insulated home with the same R value and requires 3/5 of wall thickness (laminated commercial timber) to achieve the same thermal rating.



Holz100 is the only known construction methodology that can be built in multiple stories without additional insulation. Passive house standards are achieved by using 35cm of Holz100 (U-value approx. 0.22). This energy saving phenomenon is possible by routing small air-pockets between the timber layers in the solid wood elements.

This diagram shows how much material is needed to achieve the U-value of $0.22 \text{ W/m}^2\text{K}$:



02. MOONWOOD

The wood is cut in the winter 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 upside-down in the forest with everything left intact. This significantly reduces the amount of cracking & warping that occurs as the timber dries out and gravity pulls the last traces of sap to its branches. Benefits of moonwood include:

- FSC and PEFC certified
- Longer durability
- Superior quality wood
- Less warping/splitting/cracking
- Renewable/Reusable/Recyclable
- No infestation of insects
- Long-lasting for centuries
- No fungus/mold
- Low carbon footprint
- No toxic wood preservatives



03. FIRE RESISTANT

The European standard in high-tech woodblock and frame buildings (with average wall, ceiling, and roof thicknesses) is maximum F30. This means that the building element resists a flame at 1000 degrees Celsius for 30 minutes. Holz100 elements reached top ratings of up to F180! This means six times safer than the usual reinforced concrete or brick walls - the ceiling ratings even better!

While flame-testing a Holz100 wall element, the hottest spot on the cold side after 90 minutes was maximal only +1.8 degrees Celsius higher than the temperature taken at the start of the test. Wood is a warmth shield and even after hours of external flame testing and heat, its innermost is quite unchanged. This is incredibly important for safety reasons, particularly in large buildings. Many fires expand faster via heat than flames. Even if this sounds impossible, we have engineered wood to be safer than concrete.

Most deaths by fire are caused by breathing in the toxic fumes of harmful building materials, whereas only 0.2% is caused by structural collapse. With Holz100, no poisonous vapours are released when burned, and there is practically no increase in surface temperature on the side opposite the fire and are therefore used as firewalls.



Thoma Holz100 (40 cm):
REI 120 minutes
or F90 fire resistance

Thoma Holz100 (17 cm):
REI 60 minutes
or F60 fire resistance



04. 100% WOOD

Pure solid wood, untreated and free of toxins provide the ideal indoor climate: NO air leaks, shrinkage, thermal bridges, and a 50-year guarantee against mold and condensation.



05. PREFABRICATION

Convenient planning, assembly and completion saves money & time with pre-cut wiring and plumbing. Assembly is completed in a few days and it is best for private customized homes.



06. COSTS

Minimal operating costs due to energy efficiency from thermal mass, comparable costs in materials and reduced costs from construction time.



07. HEALTHY LIVING

Breathe freely and easily as there are no traces of poisonous and toxic chemicals. Naturally hypoallergenic, no off-gassing, natural dust reduction (devoid of dust-attracting finishes) and fungal resistant.



08. SAFETY

Holz100 homes are inhabitable after flooding, survived storms in Germany and numerous earthquakes in Japan thanks to its outstanding flexibility to horizontal accelerations.



09. BREATHABLE & AIRTIGHT

Multifunctional solution means no need for elaborate layer arrangements in walls. No necessity for vapour barriers as the wood breathes by itself and naturally controls the indoor climate.



10. SOUNDPROOF

Holz100 offers excellent airborne and impact sound-proofing that far exceeds current norms. Guaranteed a deeper and healthier sleep as solid wood is scientifically proven to slow down your heartbeat.



11. RADIATION SHIELDING

Unlike other common construction materials, a Thoma Holz100 wall can screen up to 99% of harmful high frequency radiation. (documented by 'Universität der Bundeswehr in Munich')



12. IDEAL CLIMATE

The wooden mass of Holz100 keeps the home pleasantly warm in winter and comfortably cool in summer, compensating for temperature and humidity fluctuations for superior comfort.

THE PROCESS

Transformation of nature's beauty from one to another.

01. CERTIFICATION



We only use wood certified by FSC (Forest Stewardship Council) to ensure that our products come from responsibly managed forests that meet strict environmental and social standards. We are also certified by PEFC (Programme for the Endorsement of Forest Certification) to promote good practice and to ensure that our timber products are produced with respect for the highest ecological, social and ethical standards.

02. HARVESTING



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 benefits: superior quality, no infestation of insects, less cracking, splitting or warping, no toxic wood preservatives, longer durability, and increased longevity.

05. MANUFACTURING



The Thoma Holz100 consists of layered wooden boards that are cross laminated horizontally, vertically and diagonally connected to a standing core with beech wood dowels which are set as a raster. The mechanically compressed and dust-dried hardwood dowels are hydraulically pressed in, get moist in the process by absorbing additional ambient humidity, and swell up to connect non-detachably to surrounding wood. Synthetic resin glues or nails are not being used, resulting in a solid wood wall which contains nothing but pure wood.

06. ASSEMBLY



The planning of installations, both for electric wiring and water pipes play an important role when constructing a solid wood house. As standard, installation grooves are milled into the core layer of a Holz100 wall. The planned installation ducts for electrical wiring, plumbing, and HVAC is cut out by the manufacturer and milled in at the factory. Grooves milled for visual quality can be done on site of assembly in any size within surface layers.

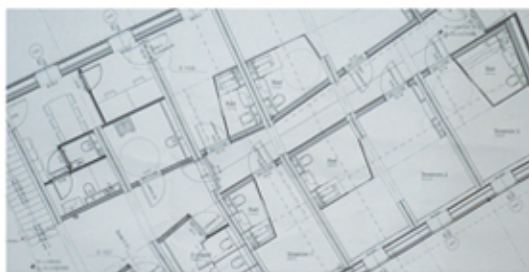


03. WOOD DRYING



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. Once fully dried, they are delivered to one of our mills for manufacturing.

04. PLANNING



Our Planning Department is responsible for drawing working plans, resulting in work preparation plans for Holz100 production. We incorporate the client's design into our planning. The ceiling can have a huge span, up to 7m (at 450kg/m³ and just 25cm ceiling thickness). Windows can be round or rectangular. A single raw material for all joints – architects and customers find a new freedom of personal expression with the Thoma Holz100 system.

07. INSTALLATION



When the site is ready, the manufactured Holz100 pieces are delivered and is assembled in a few days (3,000ft squared = 2 days) which 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.

08. COMPLETION



Construction, now more than ever, is a matter of personal decisions, a home reflecting your personality. Never before were there so many various trends and styles functioning together. So many possibilities to shape your immediate surroundings whilst matching your private preferences and crazy ideas, which make it all special. Step into your new healthy, safe, and sustainable home.



RECOMMENDATIONS

Cottages, Villas & Passive Homes

- ✓ Reduced blood pressure, heart rate and stress levels
- ✓ Certification ensures sustainably sourced timber
- ✓ Improved indoor air quality by moderating humidity
- ✓ Most environmentally friendly - stores carbon naturally
- ✓ Versatile, recyclable, renewable, and long lasting

Warmth. Comfort. Relaxation. These three words describe how we feel when we see forests. We are innately drawn towards wooden spaces as all of our senses link us back to nature. Solid wood is a blessing for anyone who have trouble sleeping or have allergies and for everyone who wants to breathe freely and worry-free in their own home. Sleep deeper with Holz100.

Schools, Daycares & Libraries

- ✓ Increased happiness and self-esteem levels
- ✓ Increased perception, focus, and memory
- ✓ Decreased blood pressure and pulse rates
- ✓ Improved comfort levels and cognitive functioning
- ✓ Improves emotional state and self-expression

"Exposure to stress during childhood and adolescence increases the probability of individuals developing stress-related mental disorders later in life, as well as influencing the timing of puberty. Decreasing the stress of school by incorporating natural wood into the classroom can therefore have significant and long lasting positive effects."



Offices & Studios

- ✓ Improved first impressions = attract business
- ✓ Improved comfort levels of employees in offices
- ✓ Positive physiological effects
- ✓ Improves emotional state and level of self-expression

"The presence of wood products within a corporate environment drastically influenced first impressions, with study subjects significantly more likely to want to work for organizations that featured wooden furnishings. Offices with wooden interiors also conveyed feelings of innovation, energy and comfort, whilst offices without wood conveyed feelings of being impersonal and uncomfortable."



Hotels & Spas

- ✓ Positive effects on the body, brain & environment
- ✓ Visually appealing and has a natural look & feel
- ✓ Warm and cozy environments
- ✓ Pleasing to touch, feel, and smell
- ✓ Elicits feelings of warmth, comfort, and relaxation

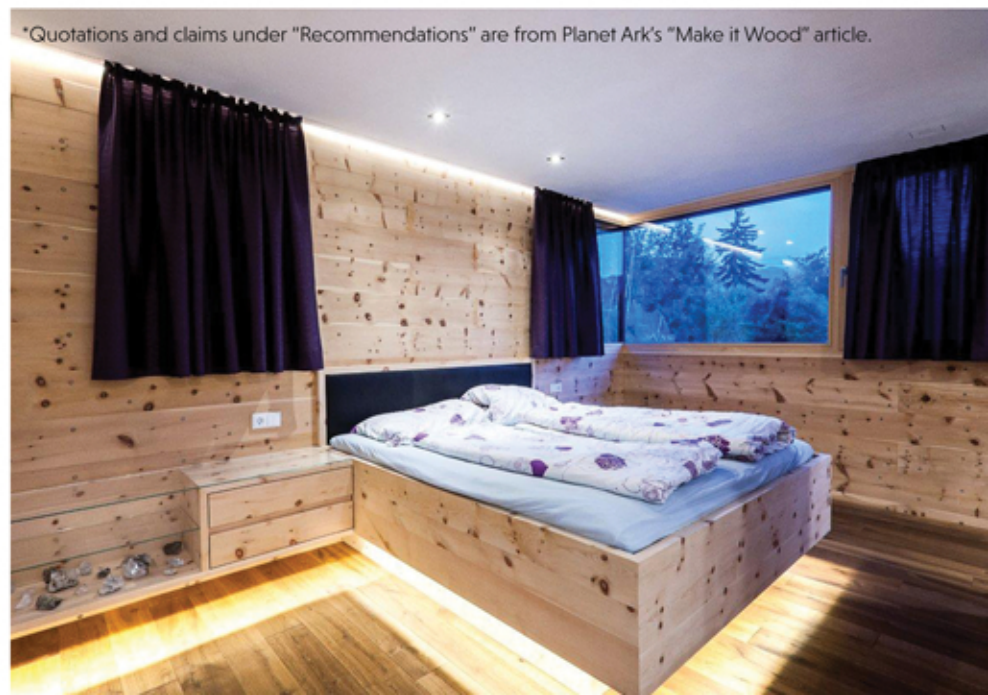
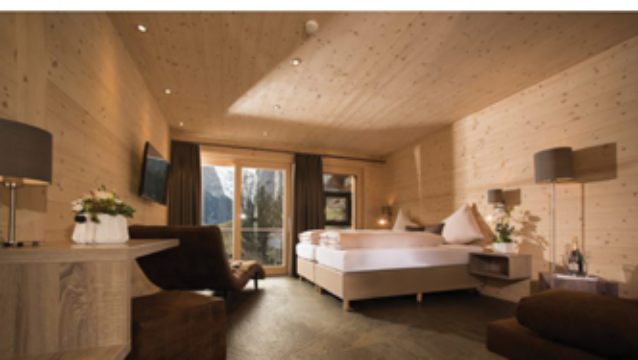
You're surrounded by a solid wooden shell devoid of any volatile organic compounds, chemicals, toxins, preservatives, resin, or glue. You're basically sleeping in the forest. These hotels, built to Wood100 standards, have year round occupancy rates of 90% - far above the industry average.

We know of no other construction method which can claim this.

Senior Homes & Medical Buildings

- ✓ Social interactions that lead to self-expression
- ✓ Reduces the risk of dementia
- ✓ Reduced recovery times = reduced medical costs
- ✓ Increased tolerance of pain in hospital
- ✓ Shorter postoperative hospital stays
- ✓ Induced feelings of relaxation in patients in rehab
- ✓ Decreased stress response and cholesterol levels

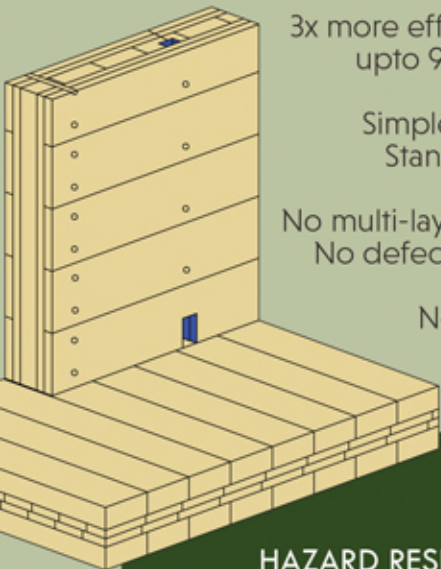
"Studies have shown that social interactions that lead to opportunities for self-expression in old people reduces the risk of dementia... Shortening hospital stays through reduced recovery times will also reduce costs to the medical system."



**Quotations and claims under "Recommendations" are from Planet Ark's "Make it Wood" article.*

THOMA HOLZ100 VS STANDARD CONSTRUCTION

1 Component: 100% PURE Solid Wood



3x more efficient in heat insulation =
upto 90% energy conservation

Simple & Quick Construction =
Standard house built in a day

No multi-layers of various materials =
No defective joints, leaks, or holes

No VOC = No bodily harm

1 Cubic Meter = 450kg

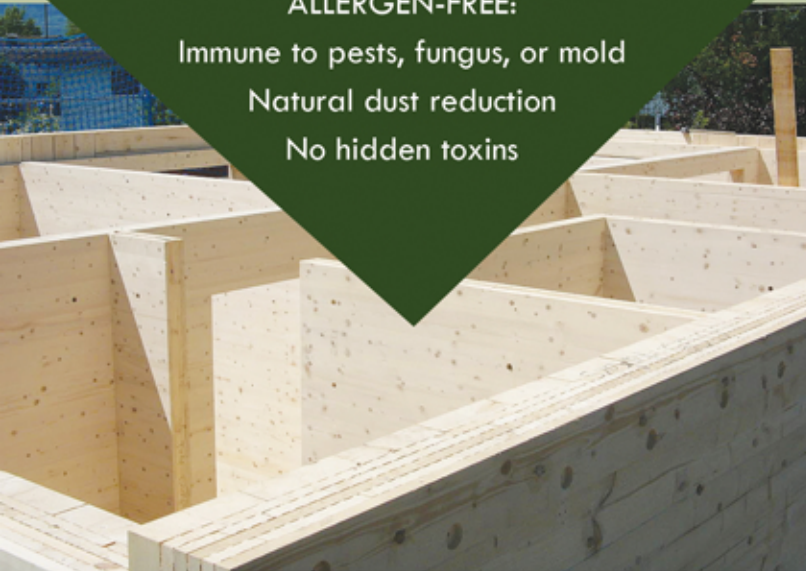
HAZARD RESISTANT:

3x more fire resistant than
brick or concrete

Highly flood & earthquake resistant
High-frequency radiation shielding

ALLERGEN-FREE:

Immune to pests, fungus, or mold
Natural dust reduction
No hidden toxins



7 Layers with Many Components

Drywall

Made of gypsum, plasticizers, foaming agents,
EDTA, silanes, paper and fiberglass

Vapour Barrier

Made of polyethylene and aluminum foil

Stud Wall

Regular Wooden Framing

Insulation

Made of fiberglass

Plywood

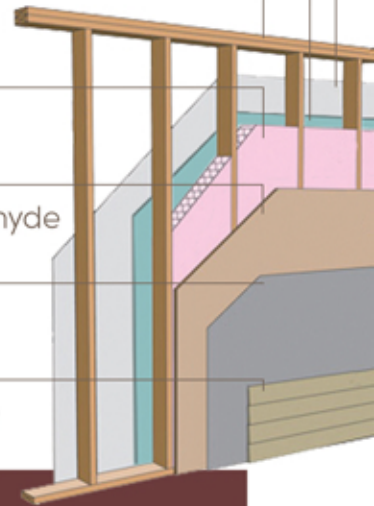
Made of wood and formaldehyde

Building Paper

Kraft paper & asphalt

Clapboard Siding

Varied; commonly man-made



SUSCEPTIBLE TO:

Fire
Water Damage
Fungus
Termites
Mold

RELEASES:

Volatile Organic Compounds
+
Causes irritation upon contact

CONTAINS:

Fire Retardants
Chemicals
Toxins
+



FIRE RESISTANCE	F90 / REI:120 min.
INSULATION VALUES	R-Value: 2.4/inch
CERTIFIED THERMAL CONDUCTIVITY	0.079 W/mk
SOUNDPROOF	63 dB
AIRTIGHTNESS	Upto 0.6
PERMEABILITY	μ : 37.2m
ASSEMBLY TIME	~1500 ft ² /day
VOC / TOXINS	None
MOLD / FUNGUS	50 Yr. Warranty

TECHNICAL DATA

Mold in fiberglass

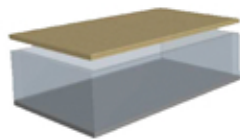
Thoma Holz100 Products

Our Thoma Holz100 wall, ceiling, and roof systems are assembled into an 'inhabitable' bare wooden shell. We also provide solid wooden floors, panelling, square timber, and finishing materials.



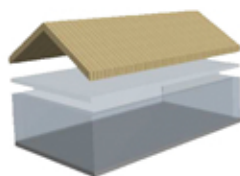
Holz100 Wall Systems (W)

- Standard (12-20cm)
- Thermal (25-36cm - 0.079 W/mK)
- Soundproofing (32cm - 54dB)



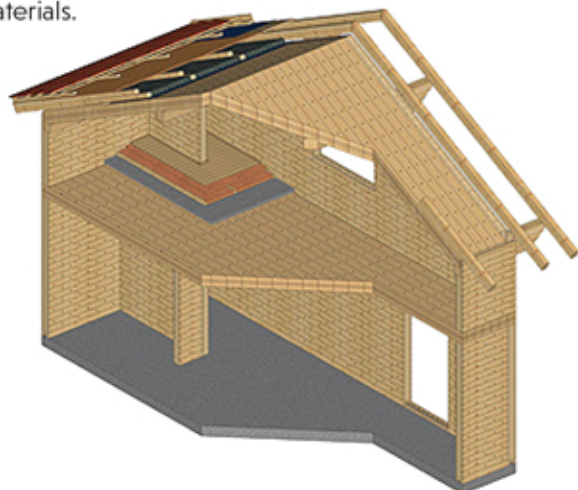
Holz100 Ceiling Systems (DE)

- Standard (17-21cm)
- Inserted Ceilings (31-40cm)



Holz100 Roof Systems (DA)

- Roof Panel (17-21cm)
- Pitched Roof (47-49cm)
- Flat Roof (48.5cm)



For more, download our product catalogue at www.holz100canada.com > about > downloads & links

Achieving high building standards with wood

The Thoma Holz100 Thermal walls consist of layers of wooden boards with a thickness of 20mm to 80mm. What's different are the grooves milled into individual layers of wood. The grooves milled into the layers of wood (integrated structural insulation) function within the Holz100 walls as microscopic air cushions without circulation, and reduce the wall's thermal conductivity which results in a substantially improved thermal insulation. At their full static load capacity, the Holz100 Thermal walls show parameters otherwise reserved solely to insulation materials (λ value = 0.079 W/m²K).

It also makes it possible for external walls to have a very high energy standard with only a little additional thickness for insulation. Our research work combines excellent technical parameters with a background of building-specific physical properties, which at least minimizes the building cost.



Who needs Holz100?

"It will be of interest to parents who want their children grow up healthy and free from allergies and asthma. Chemically treated wood can be the cause of severe health problems and also turns wood into toxic waste which poses disposal problems. The consumption of fossil fuels would drop dramatically and allow us to have a new look at a healthy lifestyle more in harmony with nature." - Dr. Erwin Thoma



**BUILD YOUR DREAM HOME WITH
Holz100 CANADA.**

CONTACT US

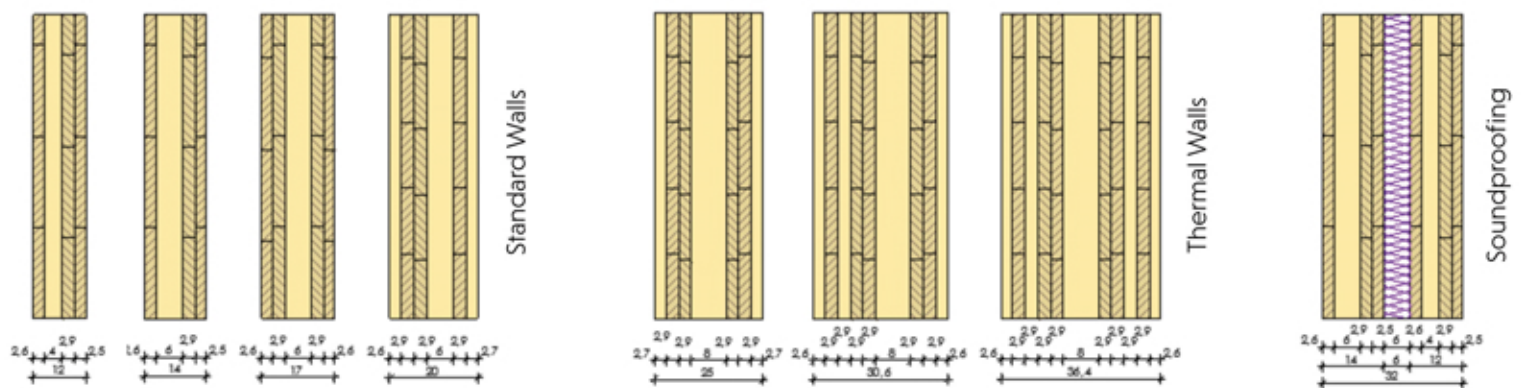
Office: (416) 876-3388

E-mail: admin@holz100canada.com

www.holz100canada.com

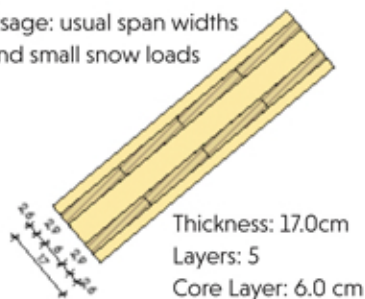


Thoma Holz100 Wall Systems (H100-W)

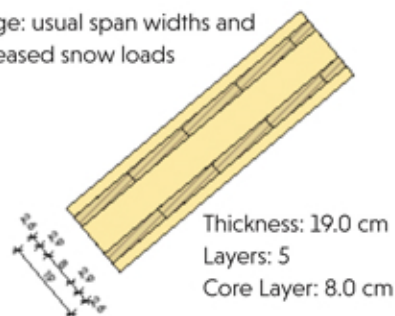


Thoma Holz100 Roof Systems (H100-DA)

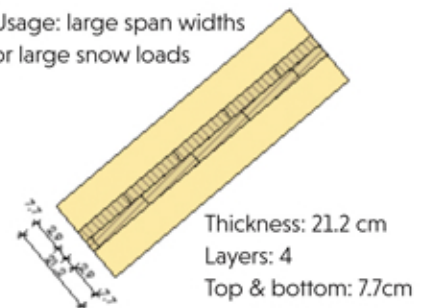
Usage: usual span widths and small snow loads



Usage: usual span widths and increased snow loads



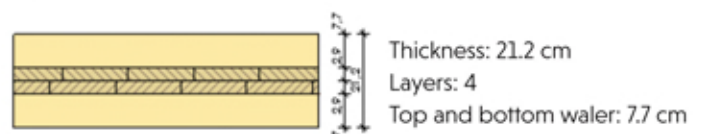
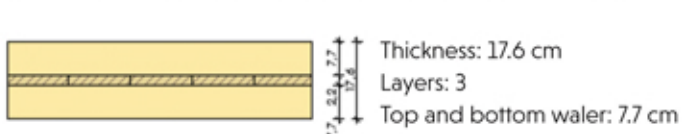
Usage: large span widths or large snow loads



Thoma Holz100 Ceiling Systems (H100-DE)

Thoma Holz100 ceilings and roof parts consist of 70-80mm walers and wooden board layers in between.

Fitting direction: single-axis towards walers. **TYPES OF WOOD: SPRUCE, FIR, PINE, LARCH**





MOONWOOD WIDE FLOORING

Wood types: Fir, larch, pine, oak

Length: Upto 6.0m

Width: 25 cm – 60 cm

Depth: 40 mm

FLOORING



ASH



OAK



SPRUCE



LARCH



THERMO-ASH

Whether it's at the old farmhouse, abbey, or at the palace, they delight us – the solid wooden floors which lure us in with its joints, illustrious branches, and old traces of long history. It is the apparent simplicity, craftsmanship, and possibly also the passion with which the floors were crafted from pure timber and sharp tools for generations.

We always stay true to age-old wisdom that has stood the test of time. Our natural, untreated floors made of pure wood, and harvested at the right time, give your rooms a very distinct style and bestow you with the highest quality and health.

Wood types for Thoma Holz100 Flooring:

Maple, beech, ash, oak, birch, pear, alder, larch, fir, pine, cherry, elm, pine

(Find out more at www.holz100canada.com > Holz100 > Products)





HEALTH AND SAFETY IS YOUR BEST INVESTMENT.



An award winning system

All product properties of Holz100 have been certified by renowned research institutions (see below). Public authorities have countless given awards to Holz100 in the fields in innovation, ecology, business efficiency and social engagement: the Austrian Chamber of Commerce, Research Promotion Fund, Chamber of Labour, The Kathy Beys Foundation, the federal states of Salzburg and Upper Austria. These awards are not only an honour, but an inspiration to drive us to continue great work in the future. Holz100 - a leading edge development for green building.

LAST BUT NOT LEAST, WE ARE THE FIRST BUILDING COMPONENT SYSTEM EVER TO RECEIVE A GOLD CRADLE TO CRADLE CERTIFICATION.



2000 German Creative Prize



2003 RIO Innovation Prize



2003 Research Promotion Funds and Work Chamber Prize



CRADLE TO CRADLE GOLD SINCE 2009



PEFC-Certificate



Salzburg Innovation Prize 2000



2001 Industrial Environmental Prize



Pro-Woman Firm 2009/2011/2013



European Technical Permission ETA-13/0785

Other Awards & Certificates:

- MA 39 Vienna (sound absorption)
- Karlsruhe University (structural analysis)
- Institute for Fire Protection and Safety Research Linz (Fire safety)
- Technical University Graz (sound insulation, cool down duration)
- Fraunhofer Institute Stuttgart (heat insulation)
- Bundeswehr University Munich (radiation shielding)
- Technical University Vienna (structural analysis)
- Technical University Graz (airborne sound, air permeability, heat transfer)

Dr. Erwin Thoma

FOUNDER OF THOMA HOLZ100

Branded and patented all around the world, Holz100 is founded and engineered by Dr. Erwin Thoma out of his wealth of knowledge regarding trees, forests, and wood. Dr. Thoma desires to bring to the attention of builders, developers, architects, and homeowners the ultimate green building material that is Holz100: a structural building system which uses 100% wood. Even now, he continues to inspire people around the world.



Frank Ghahremani

PRESIDENT OF HOLZ100 CANADA INC.

Frank's passion towards a green, sustainable, safe community was fostered by early experiences with agriculture involving crops and planting over half a million trees in BC. He graduated from mining engineering, worked years in construction, and is now a successful real estate agent of residential and ICI in North York (since 2003). Now as Holz100's first and only North American partner and distributor, Frank Ghahremani brings the option of building the healthiest living spaces right here in North America.



HOLZ100 CANADA INC.

We build the healthiest living spaces in the world for people and the environment with the highest standards of build.

CONTACT US

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