EKOPANELY®



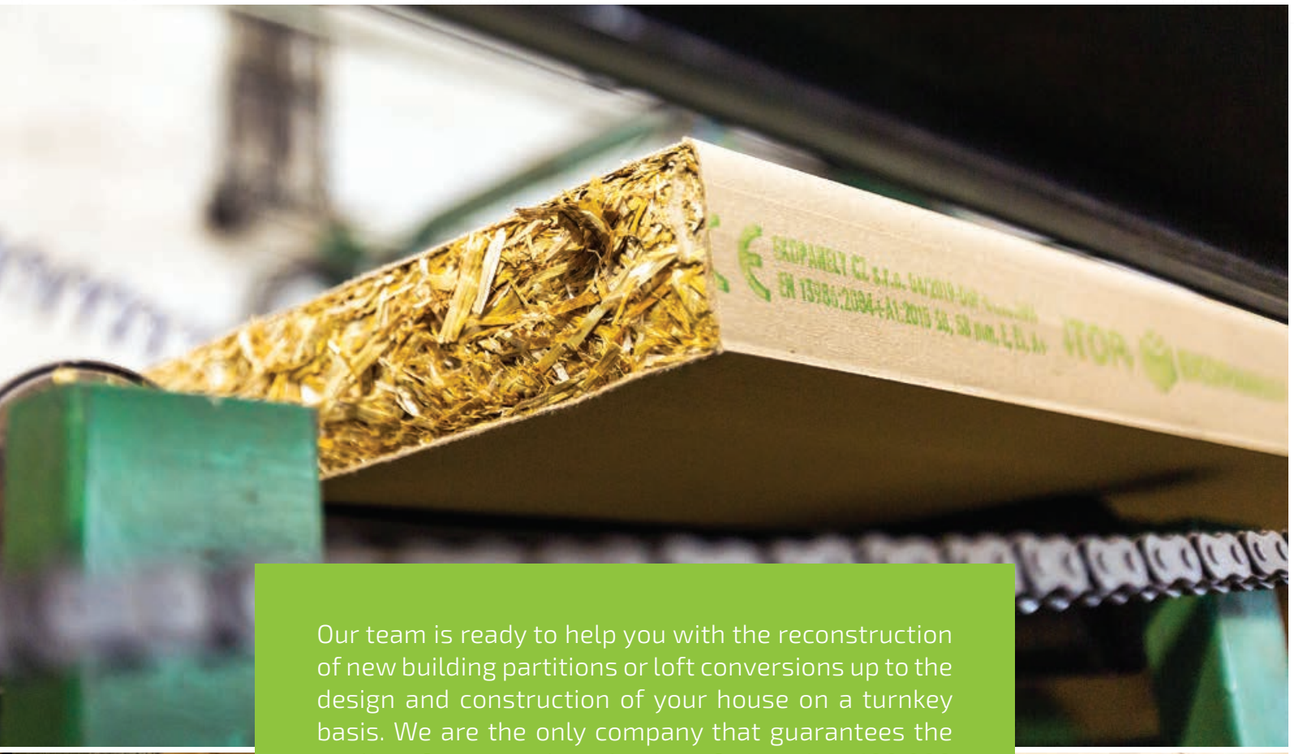
Product catalog

www.ekopanely.com

How did it start?

In 1997, we discovered the potential of the technical properties of natural building boards made from pressed straw. However, the history of straw board production and use dates back to the middle of the last century, when straw boards were widely used to restore houses destroyed by war in Great Britain. Based on proven technology, we have started the development of more modern technology with the aim of producing a quality construction product with the highest parameters for the requirements of today's construction.

In 1999, we founded the family company EKOPANELY, which was the first company on the European continent to start producing this environmentally friendly and energy-saving material. After more than 25 years of our successful existence, we are constantly working to improve the quality of our production and expand the range of application of our products and solutions. The quality of our products has resulted in the winning of a number of awards. In 2008, the Czech Construction Academy's Golden Award for a construction product and in 2012, the Czech Patron award from the Czech Chamber of Commerce.



Our team is ready to help you with the reconstruction of new building partitions or loft conversions up to the design and construction of your house on a turnkey basis. We are the only company that guarantees the quality of an annual production of more than 100,000 m^2 of our building boards. The process starts with the selection of quality straw, continues with the process of production and inspection of the boards, which can then be used for building a house.



What is an Ekopanely board?

An Ekopanely board is an ecological diffusion-open building board. It is pressed at high temperature and pressure from cereal straw without the use of binders and covered with recycled cardboard. Ekopanely board is a 100% natural, fully recyclable, solid and diffusion-open building material suitable for permanent installation in buildings. Ekopanel is CO^2 negative.



Advantages of Ekopanely boards

- Certified building system
- Sound insulating properties
- Thermal insulating properties
- Heat accumulation
- Mechanical resistance and strength
- CO^2 negative
- Fire resistance
- Fast and simple installation
- Affordability
- Healthy microclimate, interior humidity stability
- Ecological housing

Certified building system

Demonstrating application parameters is an important step in gaining customer confidence. These are verified by testing in accredited testing laboratories in accordance with valid standards. This especially applies to fire and sound parameters.



Sound insulating properties

Due to the higher density and fiber core, Ekopanely boards have excellent acoustic properties. Simply put, they do not transmit much vibration to other structures and at the same time they have good absorption properties, i.e. they do not reflect sound (there is no echo). These features can be used, for example, in music recording studios.
The density of the straw core, the orientation of the Ekopanely boards fibers and other parameters are behind the excellent sound-insulating properties of the Ekopanely boards. The classic feature of spaces built from Ekopanely boards is the absence of echo.



Thermal insulating properties

With their insulating capabilities, Ekopanely boards help to overlay thermal bridges in a building over the whole area caused by a wooden load-bearing structure, anchoring or the discontinuous layer of thermal insulation.



Advantages of Ekopanely boards

Heat accumulation

The densified compressed straw core gives Ekopanely boards the ability to store heat with the added value of thermal insulation properties. Ekopanely boards buildings are better able to cope with rapid temperature changes and thus save heating costs. They also help prevent overheating in the summer months.

Phase shifts are given for individual system applications, while it is always necessary to assess the entire structure of the construction, not just the selected layer. For example, heat penetrates into a building with a delay in summer, i.e. by the gradual heating of individual layers. Overnight, the wooden building is "cooled" down with air at a lower temperature and keeps the cold until the evening. In winter, on the other hand, the wooden building heats up during the day and keeps the warmth until morning, even if you stop heating in the evening. A rational solution is the application of Ekopanely boards in the creation of a residential attic space due to the frequent overheating of attic spaces in summer. OSB boards or plasterboard do not have such storage capacity.



Mechanical resistance and strength

Due to the core density and the high pressing pressure used in production, the Ekopanely board has very good mechanical properties. Above all, its puncture resistance is excellent. The partition or suspended ceiling simply cannot be broken through with a hammer or other sharp object.



Fire resistance

The straw core is compressed under high pressure and therefore contains a minimum amount of air. The minimum amount of air cannot support combustion and creates a self-extinguishing effect. This self-extinguishing effect is one of its distinct advantages. The Ekopanely board does not contain chemicals whose vapors would be flammable and thus promote its combustion.



Affordability

The installation of Ekopanely boards is quick and easy. After training, it can be handled by a skilled craftsman or directly by the investor. This can reduce investment costs. Although the Ekopanely board is an ecological material, it is still affordable for ordinary customers. When comparing the parameters of similar products with the Ekopanel, you will find out that the Ekopanely board is the right choice! The ratio of quality, parameters, cost savings and cost is really friendly.



Healthy microclimate, interior humidity stability

Due to the fibrous nature of straw, the materials made from it have low thermal conductivity and are permeable to water vapor.

A favorable feature of Ekopanely boards is that they absorb excess moisture into the inner porous structure of the straw fibers when the air humidity is increased and, when it is lowered, gradually releases it into the environment. This mechanism positively affects the indoor microclimate, especially in winter.



Ecological housing

The Ekopanely board core is pressed from cereal straw at high pressure and temperature without added binders and impregnations. The straw core is covered with recycled paperboard.

This adhesive complies with the strictest hygienic standards and is applied in a thin layer. Both straw and paper are organic materials that can easily be recycled once the building has reached the end of its life. Ekopanely board is classified as an organic product.

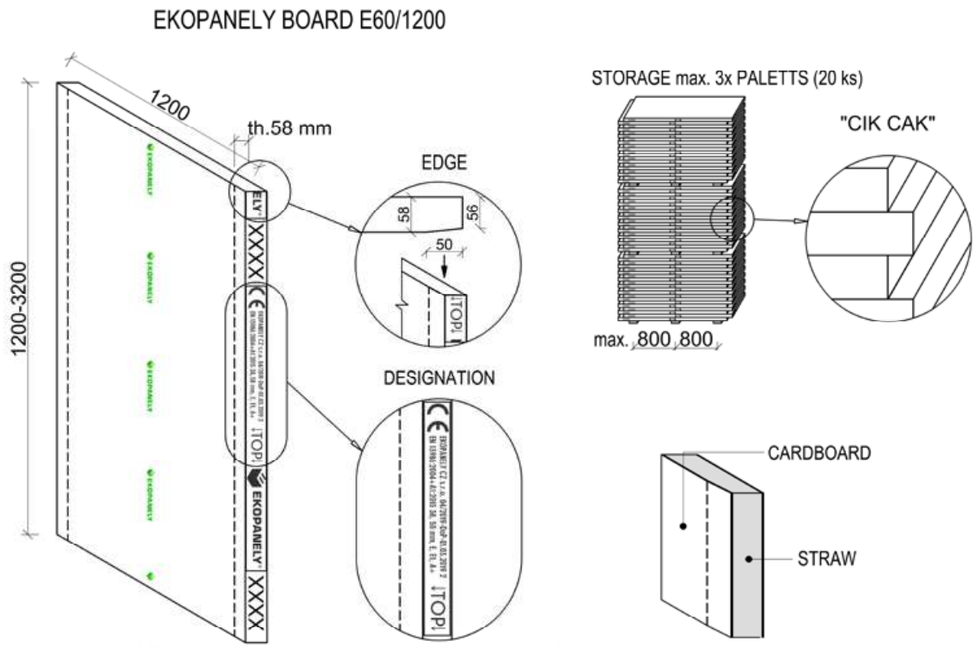
The Ekopanely boards are delivered to the customer in the required length, thus minimizing waste and saving costs. By using Ekopanely boards in house constructions you will ensure healthy living for you and your family. Ekopanely boards are ratedA+ (VOC) and therefore free of any inorganic vapors.



Technical parameters

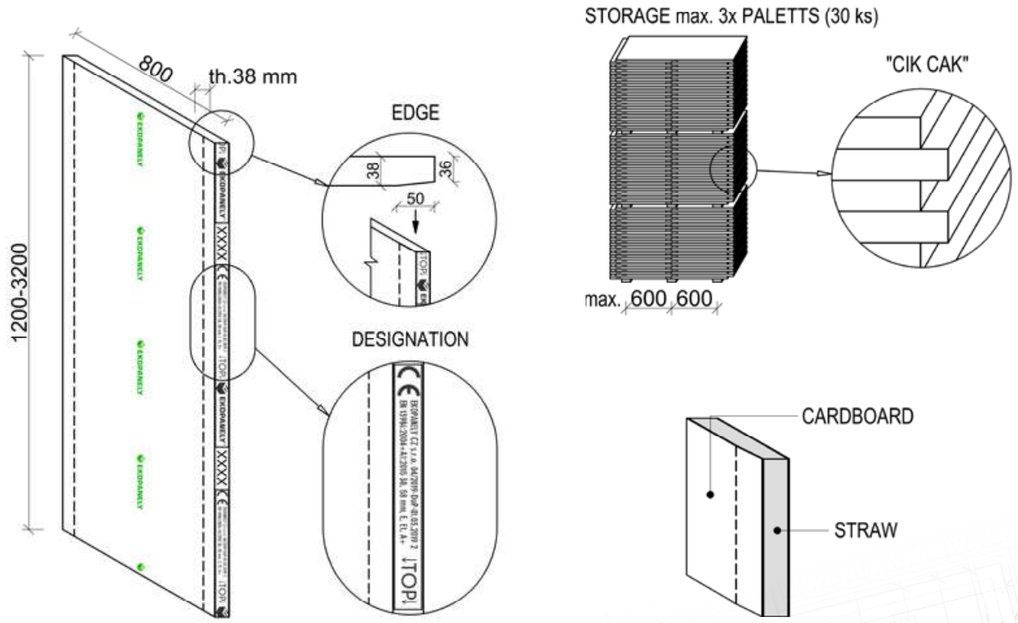
E60 Ekopanely board

Description	Value	Unit	Legal regulation
dimensions (thickness, width, length)	60 × 1200 × 1200 – 3200	mm	
average area weight	22	kg/m²	
volume average weight	379	kg/m³	
thermal conductivity coefficient: λ	0,099	W/(m.K)	ČSN EN 13986, EN 12664, EN 10456
diffusion resistance coefficient: μ	9,7		ČSN EN 13986, EN ISO 12572 B (23 °C, 0/85 % relative humidity)
reaction to fire: category	E		ČSN EN 13986, EN 13501-1
determination of free volatile organic compounds (TVOC)	A+		ČSN EN ISO 16000-10
Climate change (GWP)	-33.9 kg	CO^2 eq	Biogenic carbon content in product 10.7 kg C

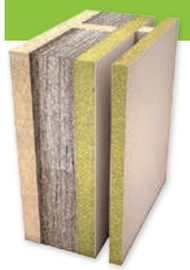


E40 Ekopanely board

Description	Value	Unit	Legal regulation
dimensions (thickness, width, length)	40 × 800 × 1200 – 3200	mm	
average area weight	17	kg/m²	
volume average weight	379	kg/m³	
thermal conductivity coefficient: λ	0,099	W/(m.K)	ČSN EN 13986, EN 12664, EN 10456
diffusion resistance coefficient: μ	9,7		ČSN EN 13986, EN ISO 12572 B (23 °C, 0/85 % relative humidity)
reaction to fire: category	E		ČSN EN 13986, EN 13501-1
determination of free volatile organic compounds (TVOC)	A+		ČSN EN ISO 16000-10
Climate change (GWP)	-33.9 kg	CO^2 eq	Biogenic carbon content in product 10.7 kg C



Application - existing wall cladding | sandwich constructions



Perimetr wall EKO2

RECOMMENDED

Supporting perimeter structure including covering from E. boards, thk. 360 mm

Recommended use:
- vertical perimeter structures of low-cost houses

Parameters:
- max wall height according to the design of the supporting structure
- fibreboard, KVH prism including thermal insulation, E60, wooden grating, E40
- heat transfer coefficient U = 0.153 W/m².K
- fire resistance REI 120 DP3



Perimeter Wall EKO 2 CLT

Load-bearing perimeter structure with interior cladding made of Eko. boards

Recommended use:
- vertical perimeter structure for buildings with higher structural demands

Wall composition:
- wood fiber board, CLT panels, wooden framework including thermal insulation, Ekopanely boards E40

Specifications:
- maximum wall height: according to the design of the load-bearing structure
- thermal transmittance: variable depending on requirements



Inner cladding EKO1 - E40

Simple inner covering of existing walls

Recommended use:
- vertical cladding of masonry and wooden walls
- attic build-ins, timbered houses, log cabins, half-timbered constructions

Parameters:
- 1 layer E40 on wooden construction grating
- increases insulation parameters of existing wall
- improves the acoustic parameters



Partition E2N CLT

Interior load-bearing partition, thickness: 290 mm

Recommended use:
- partitions for load-bearing purposes, structural reinforcement, and ensuring high sound insulation performance

Wall composition:
- Ekopanely boards E40, CW profile with acoustic insulation, CLT, CW profile with acoustic insulation, Ekopanely boards E40

Specifications:
- maximum partition height according to the design of the load-bearing structure

Application - partitions



Partition E2 M

RECOMMENDED

Installation partition for non-load-bearing purposes, thk. 80 + X mm

Recommended use:
- partitions with technical distributions and installations
- partitions with a higher need for soundproofing (kids room, bathroom, bedroom,...)

Parameters:
- max partition height 3200 mm for standard application
- 2 layers of E40 including sheet metal grating and acoustic insulation
- important ordering of height of Ekopanely boards according to height of custom-made partition (1200 – 3200 mm)
- soundproofing 51 dB (X = 50 mm)
- fire resistance EI 60 DP3



Partition E2W

Installation partition for non-load-bearing purposes, thk. 80 + X mm

Recommended use:
- partitions with technical distributions and installations
- partitions dividing any room in a building (corridor, kitchen, living room, bathroom, bedroom, ...)

Parameters:
- max partition height 3200 mm for standard application
- 2 E40 layers on wooden construction
- the gap between the Ekopanely boards is always supported by a wooden wall upright
- selection of X = 40/60 mm according to the selected wooden profile
- ordering of the Ekopanel board height according to the size of the custom-made partition (1200 – 3200 mm)



Partition E2 N

Internal supporting partition, thk. 200 mm

Recommended use:
- partitions for supporting purposes and building reinforcement

Parameters:
- max partition height 3000 mm
- E40, KVH prism including acoustic insulation, E40
- important ordering of the length of Ekopanely boards according to height of the custom-made partition (1200 – 3200 mm)
- fire resistance REI 45 DP3



Partition E1

Self-supporting simple partition for non-load-bearing purposes, thk. 60 mm

Recommended use:
- lightweight partitions and screens
- bathroom (optical toilet partition)
- kitchen (drawing the wall to the kitchen unit)
- dividing a dressing room
- dividing the space below the stairs

Parameters:
- max partition height 2800 mm
- usage only 1 pc E60 vertically
- important ordering of length of Ekopanely boards according to height of custom-made partition (1200 – 2800 mm)
- fire resistance EI 30 DP3
- soundproofing 33 dB

Application - suspended ceilings

Slope EKO 1 - E40 — RECOMMENDED



Simple inner covering of slopes, thk. 64 mm

Recommended use:
- slope ceilings of ceiling and roof structures
- attic build-ins

Parameters:
- 1 layer of E40, wooden grating, thermal insulation
- heat transfer coefficient U = 0.14 W/m².K (insulant λ=0.037 W/m.K, 300 mm)
- phase shift up to 8 hours
- fire resistance REI 30 DP3

Ceiling EKO1 - E40 — RECOMMENDED



Simple inner covering of ceilings, thk. 64 mm

Recommended use:
- horizontal ceilings of ceiling and roof structures

Parameters:
- 1 layer of E40, wooden grating, thermal insulation
- heat transfer coefficient U = 0.14 W/m2.K (insulant λ=0.037 W/m.K, 300 mm)
- phase shift up to 8 hours
- fire resistance REI 30 DP3

Ceiling EKO 1 CLT – E40



Interior simple ceiling cladding made of CLT

Recommended use:
- horizontal and sloping ceilings of ceiling and roof structures

Wall composition:
- 1 layer of Ekopanely boards E40, wooden framework, CLT panel, thermal insulation

Specifications:
- thermal transmittance (variable according to requirements)
- phase shift up to 8 hours









References



1.

Reconstruction of the hall, 3 000 m²
Příbram – Czechia (2010)



2.

Partitions, ceilings, wall cladding, 4 500 m²
Austria (2014-15)



3.

Family houses, three houses, 2 000 m²
Dnepropetrovsk – Zaporozhye (2010)



4.

Partitions, 5 000 m², Berlin,
Germany 2022



5.

Partitions, wall cladding, 3 000 m²,
Kirchanschöring, Germany



6.

Wooden building, 1 000 m², La cumbre,
Argentina (2020)



7.

Partitions, ceilings, 3 000 m²
Bristol – United Kingdom (2017)



8.

Partitions, ceilings, 3 000 m²
Low Tatra – Slovakia (2021)



9.

Wooden building, 1 000 m²
Sofia – Bulgaria (2019)



10.

Family houses, 1 000 m²
Estonia – Parnu (2018)



11.

Project KARG, 1 000 m²
Estonia (2021-22)



12.

Partitions, 400 m², Rovinj,
Croatia (2024)

We have delivered Ekopanely boards to more than 50 countries around the world. They have been used in family homes in Bulgaria, Sweden, the United Kingdom, and even Argentina. The proof of the quality and growing popularity of Ekopanely boards is seen in numerous projects of low-energy prefabricated timber buildings, turnkey homes, and self-built houses. Interest in using Ekopanely boards is also growing in the market for large projects such as office buildings, residential buildings, and development projects, etc. The ideal combination is with new progressive technologies such as the CLT system, the ECOCOCON straw block system, and others.





References in Czechia



Mnichovice - 2015 - family house



Prague Černošice - 2015 - summer cottage



Hradišťko Štěchovice - 2020 - family house

Proof of the quality and growing popularity of ecopanels are many realizations of low-energy prefabricated wooden buildings, turnkey prefabricated houses or self-build houses. In the Czech Republic we have already realized over 700 wooden buildings and countless stand-alone applications.



Litomyšl - 2013 - family house



Kladno - 2019 - family house





Nemojov - 2020 - family house



Račín - 2017 - family house



Chrudim - 2016 - family house

more info



Liberec - 2016 - family house



Nový Přerov - 2016 - family house



Klešice - 2021 - family house



Radčice - Skuteč - 2018 - family house



Pěčín - 2013 - partitions, ceilings



Zlín - 2014 - family house



Mnichovice - 2024 - family house



Záhořičko u Čkyně - 2022 - family house





Holiday cottage in Prague

Combination of wooden frame and frame construction. Some parts are prefabricated on CNC machines due to granted details and static requirements.
The cottage has a fully glazed gable in which part is an open gallery. The whole building is lined with a final layer of wooden siding from Siberian larch.



Wooden building in Vysočina (Highlands Region)

The design of the new building was created in an architectural studio so that it perfectly blends in with the surrounding landscape of the Žďár forests, which are almost part of the plot.











Family house in Mnichovice near Prague

In September 2015, the construction of a one-storey family house with a residential attic with the Ekopanely boards system was started in Mnichovice near Prague. EKOPANELY SERVIS s.r.o. supplied construction work up to the construction phase before completion according to their own documentation. The built-up area of the house is 93.3 m2. The investor realized the foundations on his own. The project is based on an architectural study of a gable roofed family house located near the forest. In the main living room, there will be large glazed areas and an open gallery up to the ridge and a wooden ventilated facade will be installed from outside.











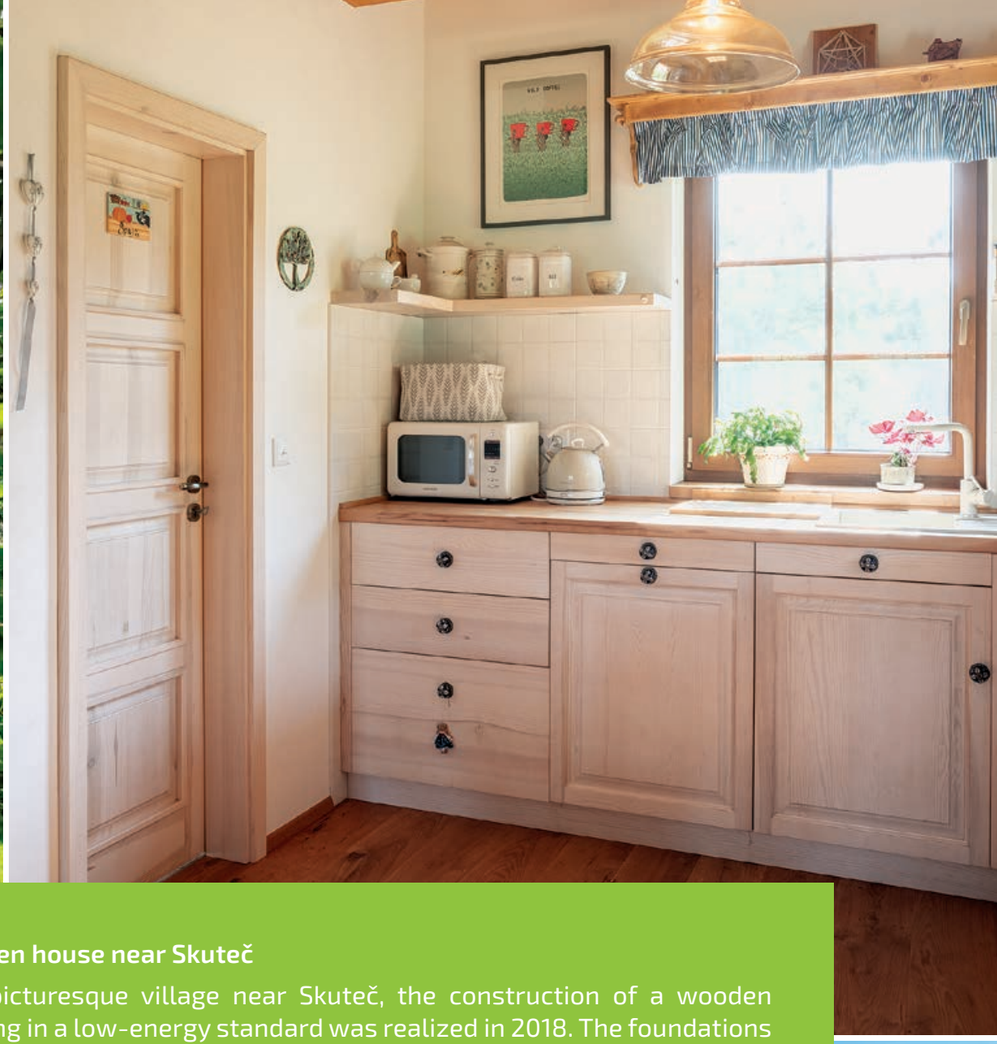
A family house in the village of Klešice

Our most successful house model, ALFA 140, was also chosen by customers in the village of Klešice, where we built a total of 8 timber frame houses. This is one of the most successful implementations. The layout of the house is thoughtfully designed to ensure maximum comfort for its users. One part of the house is dedicated to shared family life, while the other provides privacy for each member individually.

The spacious living room is flexible and can be connected to the kitchen area. The house also includes a practical utility room and a separate WC, separate from the private bathroom.



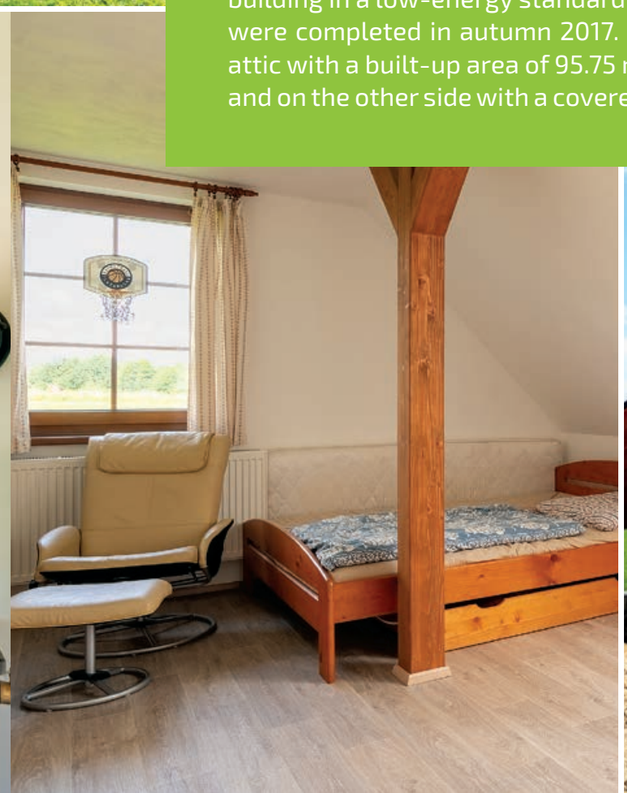




Wooden house near Skuteč

In a picturesque village near Skuteč, the construction of a wooden building in a low-energy standard was realized in 2018. The foundations were completed in autumn 2017. It is a family house with a residential attic with a built-up area of 95.75 m2, on one side with a covered terrace and on the other side with a covered garden store and one parking space.







EKOPANELY®

- Design, manufacture and construction
- More than 800 realizations in CZ
- Low-energy and passive wooden buildings
- Production of Ekopanely boards since 1999
- More than 25 years of experience
- Exports to the whole world
- Unique production in Europe
- 2 production lines
- Variability of dimensions

Advantages of buildings in the Ekopanely boards system

- Heat accumulation
- Acoustic ability
- Diffusion-openness
- High mechanical resistance
- Insulating ability
- Thermal stability
- Energy efficiency
- Fire resistance
- Self-help
- Simple installation
- Speed of dry construction
- Custom formatting of boards
- 100% organic product
- Natural climate in the building
- Medical harmlessness
- Recyclability

Our services

- Standard and individual buildings
- Project works
- Production documentation
- Custom made production of Ekopanely boards
- Professional training in the Ekopanely boards system
- Implementation of wooden buildings
- Implementation of residential attics
- Implementation of reconstruction and extensions
- Technical support
- Construction supervision



EKOPANELY CZ s.r.o. EN 01/2025

QR CARD

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