

# A·FOLD<sup>®</sup>

h o u s e s

We believe everyone in the world should be able to afford a home

— Made in Italy —



[www.a-fold.com](http://www.a-fold.com)

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# A·FOLD<sup>®</sup>

h o u s e s

## FOLDABLE LIVING

MODULAR UNITS

**A·FOLD**<sup>®</sup>  
h o u s e s

The beginning of housing revolution

**A-FOLD** houses use traditional building methods and standard materials to build innovative modular homes that unfold to provide quickly and easily an affordable, high-quality, sustainable living space. Durable and earthquake resistant, it's the perfect solution for any kind of purpose from residential houses, sport villages and resorts to disasters relief. We design safe and cozy spaces that can grow, move or change with your needs. Designed for an extremely comfortable living, A-FOLD guarantees an innovative and affordable housing solution. A-FOLD perfectly fits wherever you want: large city or rural area, up to the mountains or in the seaside village, A-FOLD adapts perfectly to any environment. You can add your personal touch picking up the preferred sizes and with your preferred materials, according to your needs and your budget. We offer you many construction options and finishes to personalize your own home. Through our highly standardized manufacturing process and dry assembly structure, you can save time and money and protect the environment. Our houses are in the standard version reach a high energy efficiency A and it's always possible to improve its insulation performance. A-FOLD is a registered and patented brand. The A-FOLD houses are design and produced in Italy. Our team has a solid experience on prefabricated construction acquired in over 20 years of activity in projecting, manufacturing and developing various building solutions always with an eye to the green technology. Our challenge is to revolutionize the prefabricated affordable building industry through smart designs and innovative manufacturing processes. A professionalism that comes from a solid family tradition, from the continuous desire to update design and production techniques with the use of cutting-edge machineries. Strength and passion of a dynamic environment with eyes fixed to a better future. The spirit of innovation originates from love for nature, because the only way doing business that we have known is to improving the environment in which men live, investing in the quality and style of the habitat, ensuring well-being and harmony. Our activity contributes to bio-architectural development through solid and advantageous answers, the result of a work made of commitment, intuition, seriousness, and above all passion.

Model A









# CONTROLLED, PRECISE, HIGH EFFICIENCY CONSTRUCTION SYSTEM

**A-FOLD** builds ecological wooden houses with a preassembled frame structure which is composed of a structural frame and lateral curtain walls with thermal-acoustic insulation inside and outside the load-bearing structure, giving the building envelope the seismic and thermal functions. The system uses only mechanical fixings without the use of adhesives. The systems are positioned inside the elements themselves or in compartments designed to guarantee the continuity of the insulating layers and the assistance of the absence of thermal bridges. The building's air tightness insurance frames, an essential requirement for an energy-efficient construction.

The wood is the protagonist of the A-FOLD construction language. PEFC which guarantees the management of forests in order to preserve biodiversity, productivity, renewal and vitality without damaging the ecosystem. The controlled drying process involves avoiding the use of chemical additives for the treatment of the material. The A-FOLD structures are selected with "spruce" from Austrian and German forests. Mineral fiber used for wall insulation due to its excellent thermal conductivity, vapor permeability and acoustic insulation characteristics. Produced through the melting and spinning process of basaltic rock to obtain a fibrous material in panels.

## COMPONENTS INCLUDED

### STRUCTURAL WOOD

timber frame	-OSB 3 mm 12 -KVH C24 cm 6x16
walls/roof	-rockwool insulation th. 160 mm pa=40Kg/mc -wooden planks mm 20

### STRUCTURAL STEEL

laminate	-S355JR steel hinges and profiles hot-dip galvanizing protective treatment according to EN 1090-1 and EN 1090-2
profiles hardware	-standard hardware screws class 10.9 bolts class 8.8

### PARTITIONS

	-wooden planks mm 20 -KVH C24 cm 6x8 -rockwool insulation th. 80 mm pa= 40 Kg/mc -wooden planks mm 20
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### PLUMBING SYSTEM

bathroom and kitchen	as for architectural drawings according to local regulation
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### THERMAL SYSTEM

	-high efficiency air conditioning system properly sized with external operating temperatures +40/-25 -electric water heater 80 lt storage tank
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### ELECTRICAL SYSTEM

	as for architectural drawings according to local regulation
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### FACADE CLADDING

wood	spruce shingle boarding treatment as UNI EN 351-1:1998 mm 25
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### ROOF CLADDING

sandwich panels	poliuretane/metal painted corrugated coating cm 6 (3+3)
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### FLOOR

linoleum	-natural and recyclable floor contains PEFC certified wood flour mm 2,5
vinyl	-PVC recycled floor EN ISO 10582 mm 5

### BATHROOM

sanitary ware	-bathroom sink -toilet -box shower cm 80x80 -mixer
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### WINDOW

	double glazed brugmann profile class A mm 73
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### DOORS

	smooth door, with perimeter frame, cellular structure in dehydrated cardboard, both sides MDF covered laminate
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# WALL LAYERS

## 1 WOODEN PLANKS CLADDING

The wooden planks cladding is made with wood from the best Austrian sawmills with PEFC and CE certification. Wooden planks beads treated with anti-mold fungobactericidal product of choice in an aqueous solution. The painting cycle is foreseen with a coat of impregnating agent and a coat of exterior finish with a wax base in order to make the wood water-repellent and protect it from bad weather and UV rays. .

## 2 MINERAL WOOL

Panel in mineral wool without coating, produced with recycled raw materials and with the use of Ecosse Technology®.

Mineral Wool 35 guarantees the ideal combination of thermal insulation ( $\lambda_D 0.035 \text{ W / mK}$ ), acoustic and fire safety (in fuel - A1), extreme ease and practicality of installation, with a large surface to store per pack thanks to the efficient packaging.

## 3 SOLID STRUCTURAL WOOD KVH®

KVH® solid structural wood is a building material with precisely defined product characteristics, which was developed specially to meet the high requirements of modern timber construction. KVH® is a kiln dried, graded and finger-jointed solid timber product made of spruce. KVH® is subject to additional controls over and above the general building regulation requirements.

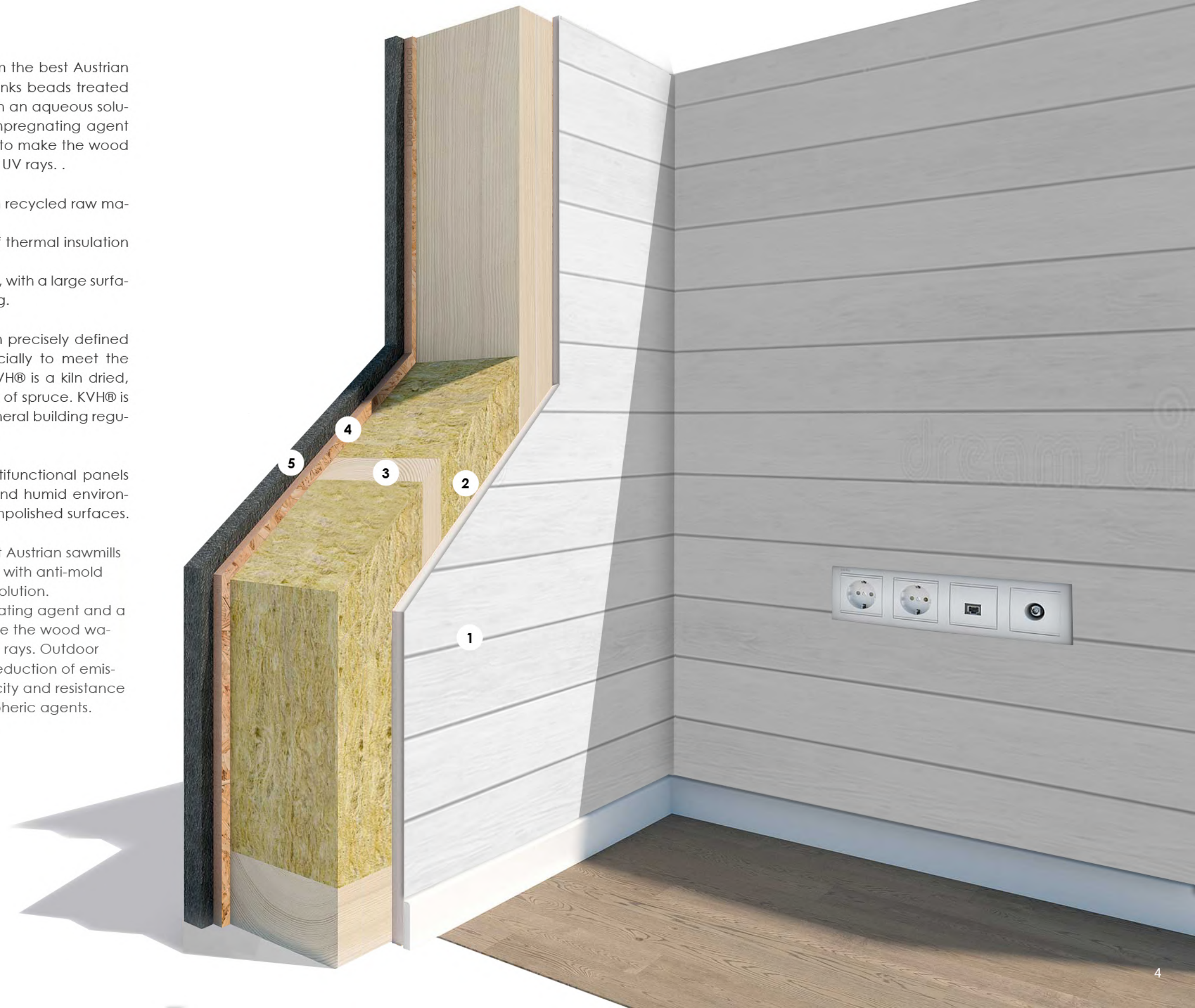
## 4 EGGER OSB 3

EGGER OSB 3 panels conforming to EN 300 are multifunctional panels that can be used for numerous applications in dry and humid environments. These panels are produced with honed and unpolished surfaces.

## 5 EXTERIOR CLADDING

The spruce cladding is made with wood from the best Austrian sawmills with PEFC and CE certification. Spruce beads treated with anti-mold fungobactericidal product of choice in an aqueous solution.

The painting cycle is foreseen with a coat of impregnating agent and a coat of exterior finish with a wax base in order to make the wood water-repellent and protect it from bad weather and UV rays. Outdoor water-based painting offers numerous advantages: reduction of emissions of solvents into the atmosphere, excellent elasticity and resistance of the paint film to temperature changes and atmospheric agents.

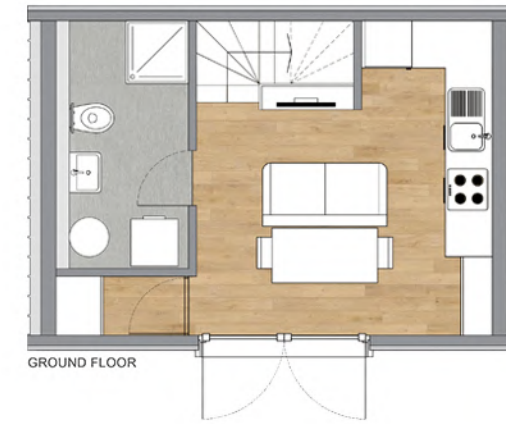






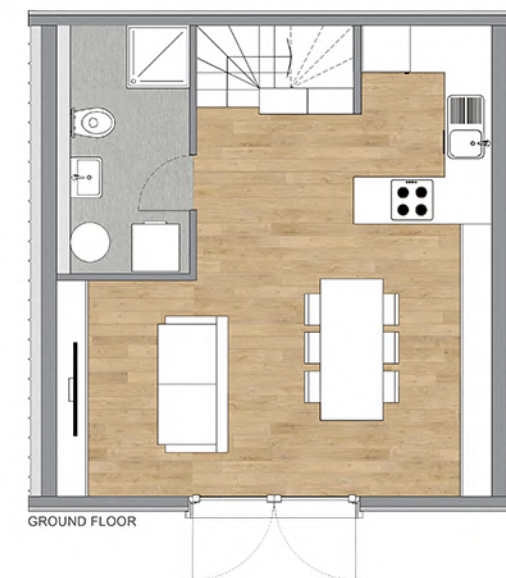
## CABIN 35,10 sqm

This is the basic model which can be used for numerous purposes. Mainly used by tour operator to build resort and glamping, CABIN fits very well as a second house in which spend amazing days off the city. The internal dimensions are 35.10 square meters or 377,81 square feet.



## YOUNG 54,05 sqm

It consists of an open space house on either levels with a combined internal space of about 54.05 square meters or 581.79 square feet. Although still very appreciated as a holiday home YOUNG could be the way for young couples to finally own a property that can grow and change along with their dreams.





## FAMILY 68,45 sq m

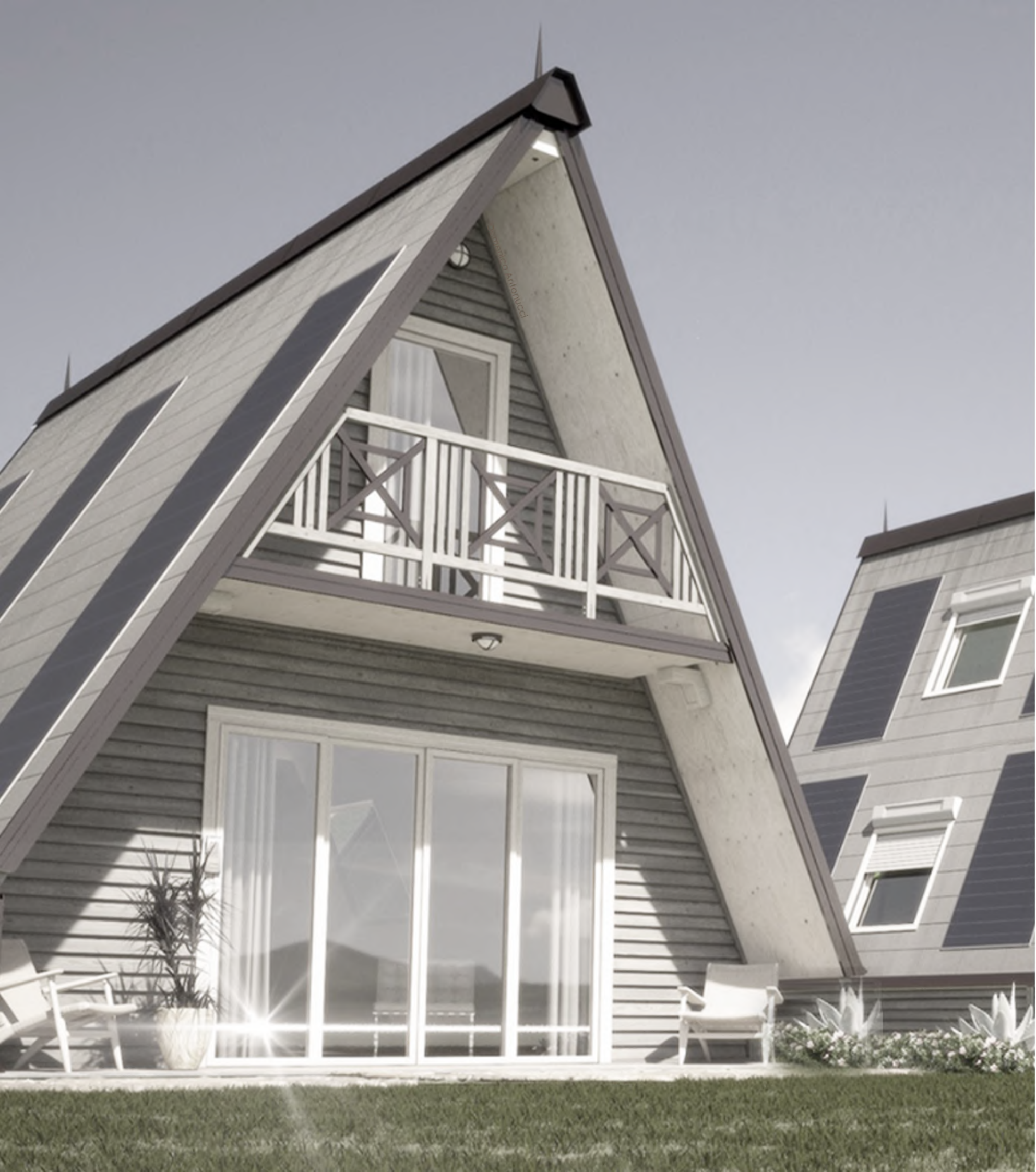
With its 3 bedrooms this model has been named FAMILY not by chance. It's the right model A for a dynamic and modern family that is into different style of life and that places the efficiency and the sustainability before the waste of the old schemes. FAMILY provides a huge living space, 3 bedrooms and 2 bathrooms in 68.45 square meters or 736.79 square feet. That's what we call a smart way living.



## VILLA 86 sq m

Our flagship is the largest model A in standard production with its 4 bedrooms and 2 bathrooms. VILLA can satisfy the needs of a large family but it could be also customized for different purposes, playing whit the huge spaces you redesign VILLA according with your spirit and your dreams. With this modules that 86.00 square meters or 934.30 square feet the possibilities are endless.





# VERANDA-BALCONY

The veranda-balcony module allows you to expand the house toward the outside having two covered spaces communicating with the interior giving you the pleasure of comfortably admiring the surrounding landscape. This module is applicable to all types (cabin, young, family, villa). The ground floor is sqm.11,10 and the first floor is sqm 7,50





# WOOD FACADE

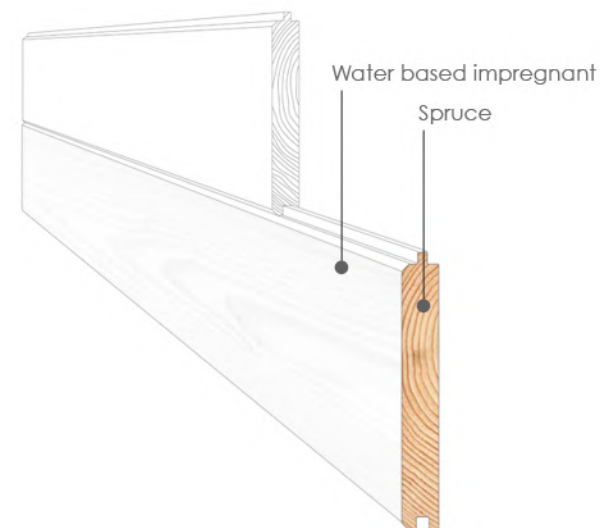
## SPRUCE SHINGLE BOARDING

The spruce cladding is made with wood from the best Austrian sawmills with PEFC and CE certification. Spruce beads treated with anti-mold fungobactericidal product of choice in an aqueous solution. The painting cycle is foreseen with a coat of impregnating agent and a coat of exterior finish with a wax base in order to make the wood water-repellent and protect it from bad weather and UV rays. Outdoor water-based painting offers numerous advantages: reduction of emissions of solvents into the atmosphere, excellent elasticity and resistance of the paint film to temperature changes and atmospheric agents.

1. White, 2. Grey, 3. Natural, 4. Larch, 5. Teak, 6. Walnut

### Technical specifications

- boarding finger joint spruce th. 25mm
- treated with anti-mold fungobactericidal
- painting with a water-based impregnating agent
- external finishing coat a wax base
- water repellent
- UV resistant





# BRICK AND STONE

## POLYURETANE AND STONE PANEL *optional*

High Definition panels resistant to all kind of weather conditions. They provide thermal and acoustic insulation properties.  
 No mutation to heat, freeze and defrost an this is an excellent water repellent.  
 With this kind of decorative panels you can make your dreams of having a traditional or rustic house combined with a modern touch come true.

### BRICK Wall Panels

Decorative panels that mimics brick with a surprising resemblance to a real brick wall. Different models from modern bricks to ancient ones, worn or British style.  
 The brick collection introduces an imitation of brick panels that look authentic.

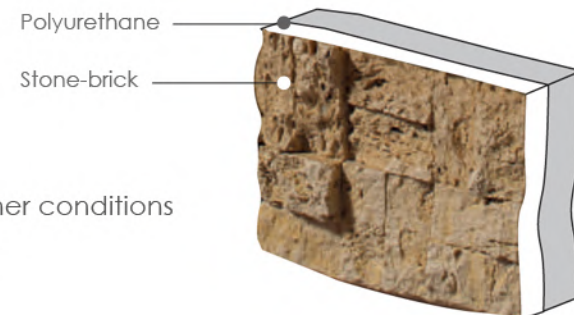
### STONE Wall Panels

The Classic Collection is made with stones of different types imitating classical coatings suitable for cottages. Our collection of panels that mimic the stone is an excellent choice when looking to reflect a serene environment.

## Technical specifications

- Crushed marble stone 4 mm
- High density injected polyurethane 2-4,5 cm (EPS)
- These components makes it very resistant to all kinds of weather conditions
- Excellent thermal, acoustic and anti-humidity characteristics.

1. Ladrillo white 2. British 3. Old british, 4. Urban, 5. Sandy white , 6. Grey



No harm to health  
 zero enviromental impact.  
 The panel is made up of 75%  
 of the ecological product.





# PVC FACADE

## PVC PANEL *optional*

PVC panels represent the modern coating solution alternative to traditional methods and materials, with a wide range of realistic and touch-sensitive effects.

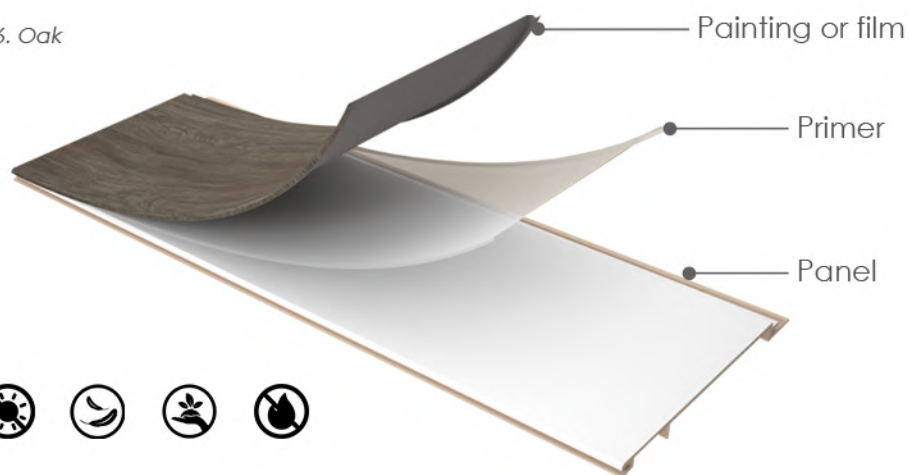
PVC panels are produced with composite materials that do not deform, are antiseptic and are not attacked by fungus or micro organisms. Essential feature that differentiates them from wooden products for a total absence of maintenance.

Waterproofing and the possibility of being washed with a pressure washer guarantee one of the main advantages of the FORTE range. With a natural design, FORTE panels are made of composite materials, a guarantee of Quality and sustainability thanks to the non-use of additives containing heavy metals, phthalates and SVHC substances. The use of water-based paints allows us to offer a more resistant and safer panel. Water-based paints allow us to comply with the rules for the reduction of emissions of solvents in the atmosphere (VOC), also protecting the health of the operator and guaranteeing excellent aesthetic and qualitative results.

1. Tortora, 2. Grey, 3. Brown, 4. White wood, 5. Teak, 6. Oak

### Technical specifications

- water-repellent
- Washable
- UV resistant
- Fireproof
- thickness 1,6 cm
- Height 20 cm





# METAL ROOF

## ISOGRECATA

This panel has always been committed to the innovation of construction products and services, with particular attention to improving the performance of buildings in terms of safety, energy efficiency and environmental sustainability.

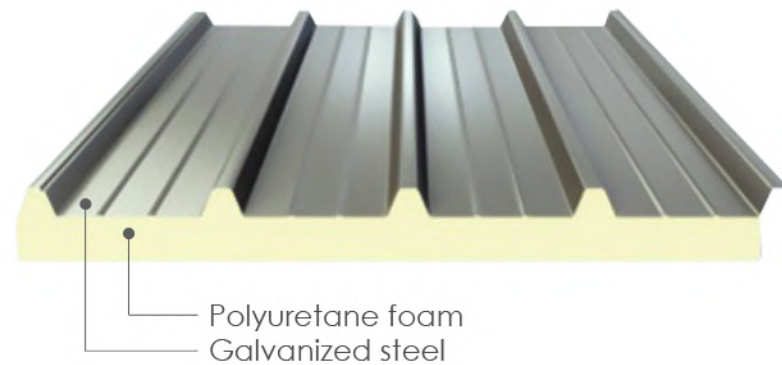
This products contribute to obtaining the prerequisites and useful credits for LEED and BREEAM certification, the international standards that measure the efficiency and sustainability of buildings.

Polyuretane isogrecata sandwich panel, with 5 grase profile and internal centesimal aluminum support.

1. White/Grey, 2. Silver, 3. Anthracite, 4. Red, 5. Brown , 6. Green

### Technical specifications

- External support: pre-painted galvanized steel profile
- Thickness profile 5/10 mm with 5 ribs
- Insulation: rigid polyurethane foam 30 mm
- Insulating thermal conductivity:  $\lambda = 0,022 \text{ W/MK}$
- Insulating thermal transmittance:  $U = 0,71$
- Insulating thermal resistance:  $R = 1,41$
- Operating temperature:  $-40^{\circ}\text{C}/+80^{\circ}\text{C}$
- Internal support: embossed centesimal aluminum



Declare.





# BITUMEN TILES

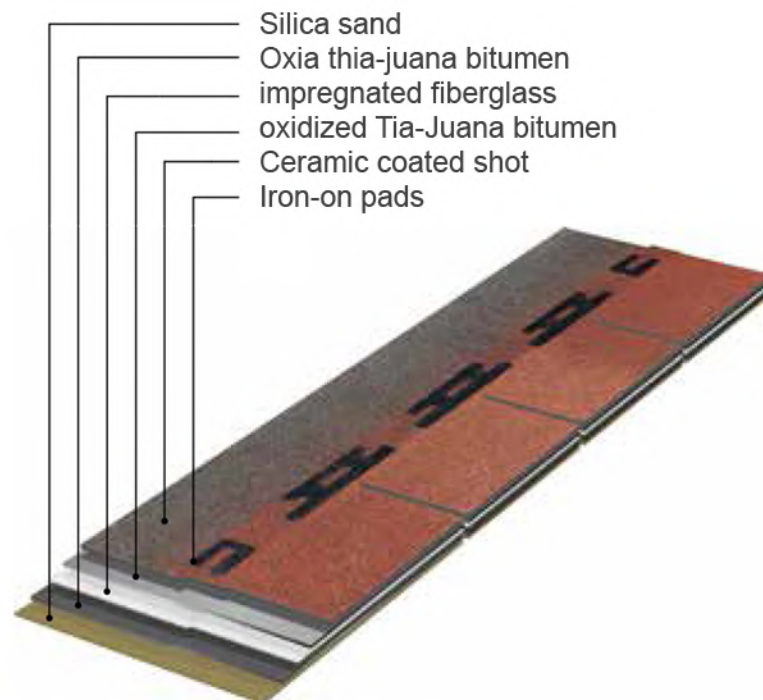
## Premium rectangular *optional*

Premium Rectangular represents the tradition of bituminous shingles, for the rectangular shape of its layers. These tiles offer unsurpassed qualities of resistance, flexibility of use and easy installation, but above all a range of 6 different colors, able to enhance any type of roof.

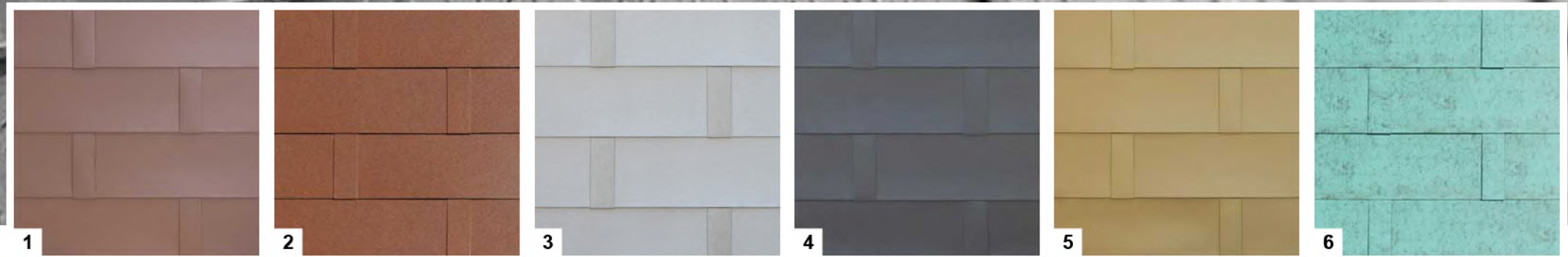
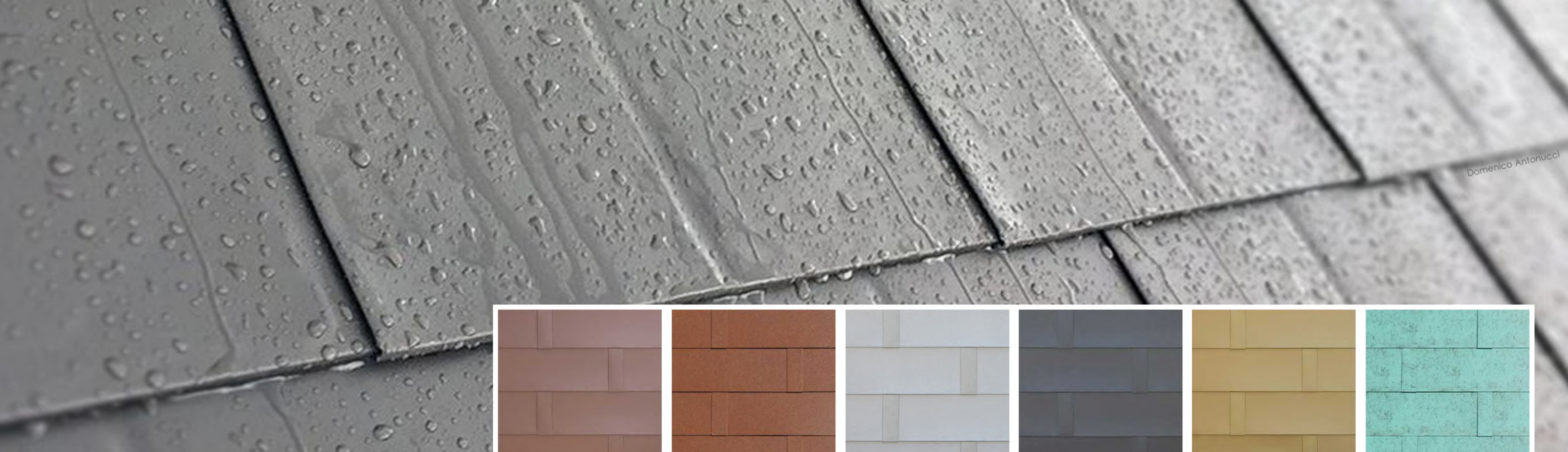
Extraordinary chromatic nuances that allow you to enhance any roofing project. The wide choice of colors gives the designer the opportunity to research the style that best suits the culture of the place or taste architectural that it intends to represent: from classic to modern.

## Technical specifications

- Bituminous compound: Tiajuana
- thickness: mm 3,3 +/-10%
- bitumen single layer: EN 544 g/m<sup>2</sup> >1300
- Single layer grit: EN 544 g/m<sup>2</sup> 1400 +/-20%
- Breaking load: MD/CMD EN 544 N/ 5 cm 1000/600
- Fire behaviour: EN 13501-5 B roof (f1)







# ALUMINUM SLATE

## Prestige ultimetal *optional*

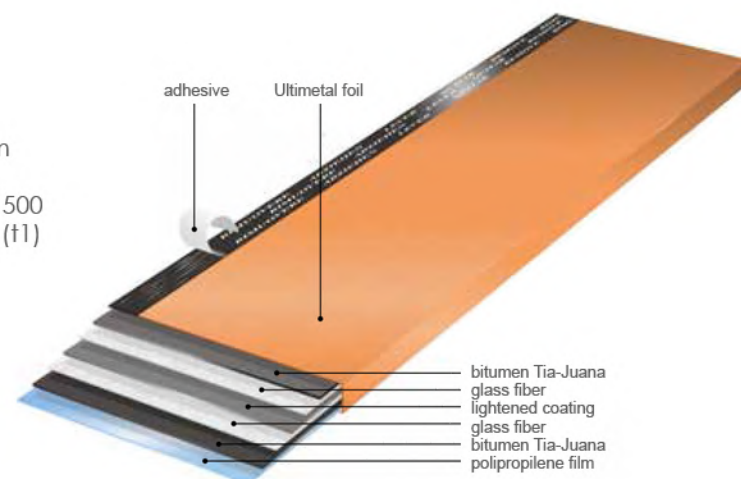
Prestige Ultimetal roof tiles: perfect for making successful roofs in every country. Made of a special prepainted aluminum and special metal alloy, with excellent resistance to oxidation and corrosion, so as to boast a particular unalterability overtime.

1. Bronze, 2. Corten, 3. Natural, 4. Slate, 5. Gold, 6. Verdigris

They are born in the IWIS research laboratories with the precise aim of achieving maximum performance in combining the primary aspects of each roof, insulation and waterproofing from the external environment, with the improvement of the same.

## Technical specifications

- Bituminous compound: Blown bitumen
- thickness: EN 544 mm 4,7 +/-10% - thick wear layer: 0,55mm
- bitumen single layer EN 544 g/m<sup>2</sup> >3000
- mechanical resistance: MD/CMD EN 544 N/ 5 cm >1500/1500
- Fire behaviour: classification according EN 13501-5 B roof (f1)



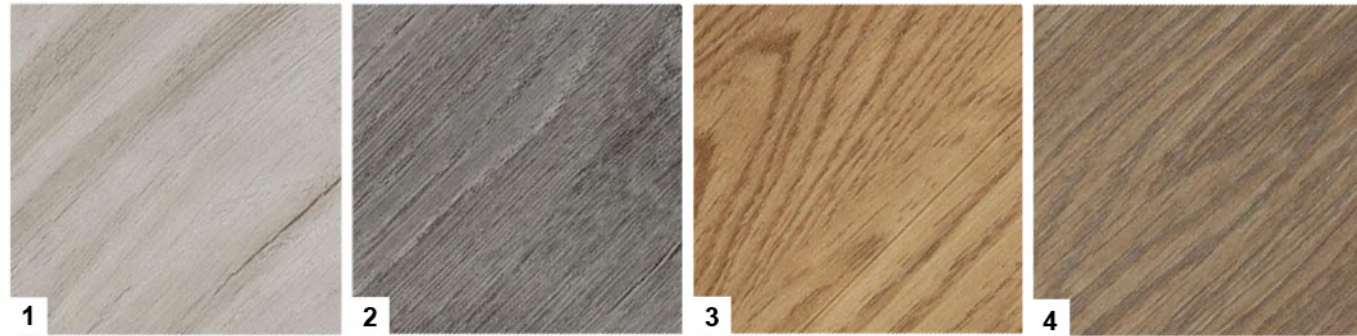


# VINYL FLOOR

## LVT Wood *optional*

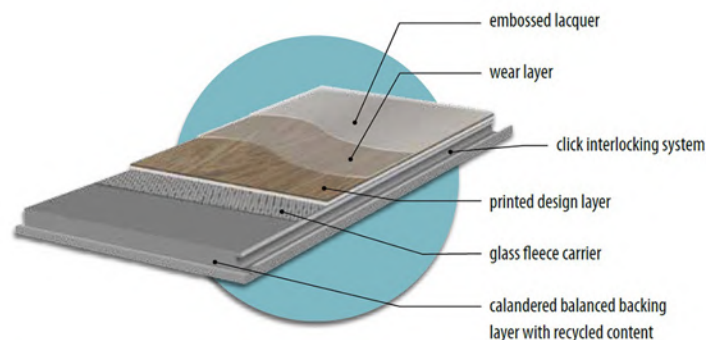
The natural beauty of wood for your floor without sacrificing the strength and durability of vinyl. LVT Allura offers comfort, exceptional dimensional stability and easy maintenance. Allura is created around a fiberglass heart which, together with its layered structure, including a calendered support made of recycled material, forms a perfect base for printing and embossing the wood effect. The texture is printed with water-based inks.

1. whitened oak, 2. rustic anthracite oak, 3. waxed oak, 4. natural collage oak



## Technical specifications

- Total thickness: 3,2mm
- Domestic use: EN-ISO 10874 class 23
- thick wear layer: 0,55mm
- Slip resistance: DIN 51130 R9
- Acoustic impact sound reduction: EN-ISO 717-2 15 dB
- Light resistance: ISO 105-02 >6
- Resistance to chemical: EN-ISO 26987 A
- Reaction to fire: EN 13501 Bfl-s1,L,NCS
- Allura is produced using 100% renewable energy
- The Allura backing contains up to 60% recycled material

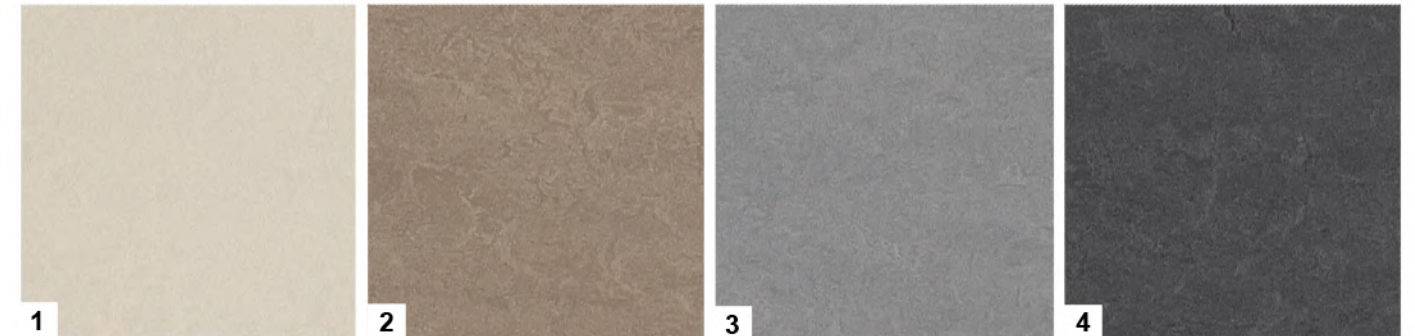


# LINOLEUM

## Marmoleum Marbled

Mild, delicate and balanced, Marmoleum Fresco offers a color palette with a tone-on-tone design and a slightly hinted mélange effect. The slight contrast of this elegant marbled design creates a restful atmosphere. The sobriety of the Fresco design allows an excellent combination with all the other collections of Marmoleum Marbled and striated.

1. edelweiss, 2. shrike, 3. eternity, 4. volcanic



## Technical specifications

- Total thickness: 3,2mm
- Domestic use: EN-ISO 10874 class 23
- Resistance to chemical: EN-ISO 26987 Resistant to diluted acids, oils fats and to the conventional solvents.
- Bacteriostatic properties Marmoleum has natural bacteriostatic properties which are confirmed by independent laboratories.
- Cigarette resistance: EN 1399 There is no melting of the surface by cigarettes.
- Slip resistance: DIN 51130 R9
- Acoustic impact sound reduction: EN-ISO 717-2 < 6 dB
- CO2 neutral: Marmoleum is produced CO2 neutral
- Renewable electricity Marmoleum is manufactured using 100% electricity from renewable sources
- Recycled content: Marmoleum contains recycled content
- Reaction to fire: EN 13501-1 : Cfl-s1,G,CS

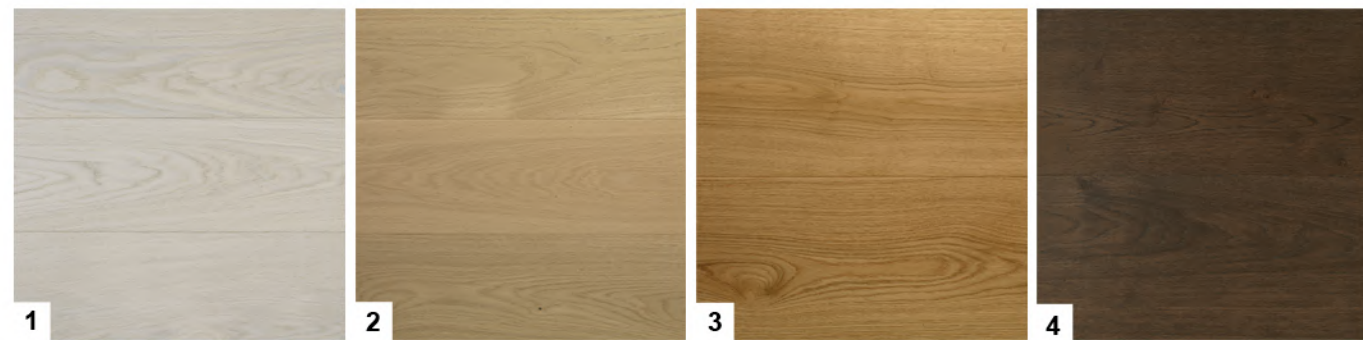


# ENGINEERED HARDWOOD

Wood plank *optional*

Warm and refined, engineered hardwood is a best-seller among the materials used for floors. Thanks to its aesthetic characteristics, with a color and a grain that allow it to be an essence suitable for any type of environment, but above all thanks to its excellent hardness, stability and durability. Qualities that reward its daily use in environments subject to intense trampling. Hard and tough, it withstands shocks and traumas.

1. White, 2. Natural, 3. Traditional, 4. Dark



## Technical specifications

- Thickness: 15 mm
- Noble wood layer thickness: 4 mm
- Support wood layer thickness: 11 mm
- Finishing with solvent-free water based paint
- Hardness: 3,4 kg/mm<sup>2</sup>
- Reaction to fire: EN 13501 Bfl-s1

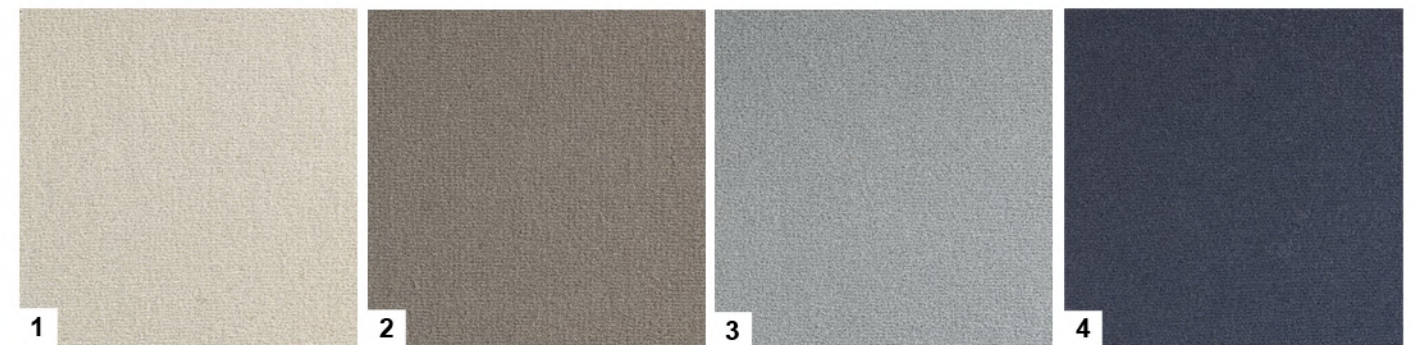


# MOQUETTE

*optional*

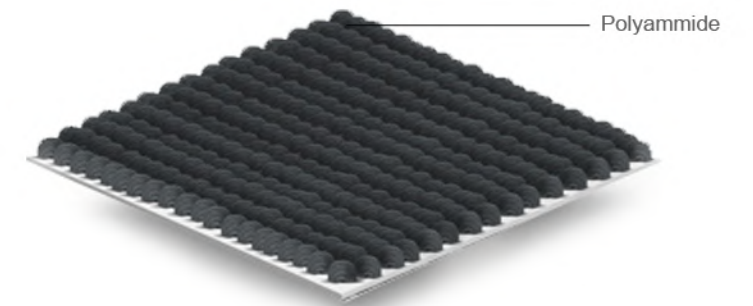
This soft velvet is the secret for an extremely soft bedroom or living room camera. Its composition is entirely based on polyamide. The savings on energy costs are also remarkable because compared to hard floors, carpets retain up to 12% more heat. The carpet has a filtering effect, halves the dispersion of fine dust and allergens (pollen, mites ...) in the air.

1. Angora, 2. Taupe, 3. Nuage, 4. Ardoise



## Technical specifications

- Structure: Velvet carpet
- Composition: 100% Polyamide
- Total thickness: 7 mm
- Acoustic insulation: ΔLw 24 dB
- Thermal resistance: 0.17 m<sup>2</sup> c ° / W
- Reaction to fire: EN 13501-1: Cfl-s1





# BATHROOM

Very pure minerals for the sanitary ware carefully selected, mixed and cooked at 1300 ° classified the white vitrified porcelain called Vitreous-China: a material totally impermeable to water, resistant to acids and alkalis, according to UNI standard standards. Shower tray in methacrylate, a solid material, it does not fear knocks, does not crack or chip, has shiny surfaces, a very high color rendering and maintains the water temperature for a long time. Gemma 2 mixers are equipped with an EKO cartridge which provides a reduction of water consumption by up to 50% and a maximum temperature setting, a guarantee of safety and savings.

1. Washbasin 50x44cm, 2. WC outlet 3. Shower plate 80x80cm, 4. Wash basin mixer, 5. Shower mixer, 6. Shower rod



# DOORS

The real challenge is to combine the mastery of craftsmanship with the technology of industrial innovation. The Isomax company has won this challenge. From the experience of the master craftsmen, innovative products are born that make your doors a real design object. Attention to detail and customer needs make our products unique and improve living comfort. Smooth door, with perimeter frame, cellular structure in dehydrated cardboard, both sides MDF covered in laminate.

1. White , 2. Grey, 3. Oak dark, 4. Oak white, 5. Oak natural, 6. Oak red





# WINDOWS

The current generation of PVC profiles we use are among the best performing on the market. They are attractive, extremely resistant and require only minimal maintenance, being the best material for windows and doors. The hardware used increases the strength of the window and the safety of your home. Then we present the advantages offered by the key elements of a window's components.

1. Polareiche 43, 2. Teak arte 65 3. Oregon 4-52, 4. Nubaum 21, 5. White , 6. Grey, 7 Dark grey, 8. Brown



## Termica 70

Termica 70 is a system with five chambers that stands out both for the robustness given by the construction depth of 73 mm with increased reinforcements, and through the thermal and acoustic insulation properties superior to other pentacameral systems.

### Technical specifications

- Brugmann profile class A
- Construction depth of the profile: 73 mm
- 5 chambers for thermal insulation and phonic protection.
- Thermal insulation profile:  $U_f = 1.2-1.3 \text{ W/m}^2\text{K}$
- Soundproofing 48 dB from outside noise
- Theft resistance Class 2 (DIN V ENV 1627)
- Estimated lifespan 50 years
- Double seals integrated in the manufacturing process (weldable)
- Insulating glass compatible between: 24 mm and 44 mm (2 or 3 glass plates)



## Termica 80 (optional)

Termica 80 is a six-chamber system which represents one of the most advanced technologies currently available in the sector of PVC frames. The construction depth of 82mm and the reinforcements with generous dimensions, and also the thermal and acoustic insulation properties obtained through the third gasket, bring this profile to the top of the sector performance

### Technical specifications

- Profile bluEvolution class A on the external wall thickness of 3 mm
- Available in the 6-chamber acoustic and thermal insulation variant
- Acoustic insulation 48 dB from external noise
- Construction depth of the profile: 82 mm
- Thermal insulation of the profile:  $U_f = 1,142 \text{ W / m}^2\text{K}$  with standard reinforcement
- $E U_f = 0.94 \text{ W/m}^2\text{K}$  con Thermtec
- Theft resistance Class 2 (DIN V ENV 1627)
- Estimated lifespan 50 years
- Galvanized steel treated armor of minimum 1.5-2 mm
- Insulating glass compatible: 44 mm (2 or 3 panes of glass)





# WINDOW FACADE

*optional*

The current generation of PVC profiles we use are among the best performing on the market. They are attractive, extremely resistant and require only minimal maintenance, being the best material for windows and doors.

The hardware used increases the strength of the window and the safety of your home. Then we present the advantages offered by the key elements of a window's components.

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- Estimated lifespan 50 years
- Galvanized steel treated armor of minimum 1.5-2 mm
- Insulating glass compatible: 44 mm (2 or 3 panes of glass)



## Pld smart glass (optional)

Smart glass is a state of the art of glass laminate with a PDLC sandwich liquid crystal sandwiched between two sheets of glass. In clear mode an electric current is passed through the PDLC.

Self-adhesive Smart Window Film applies to any existing or new glass surface. A simple ON-OFF mode of stopping the PDLC film from being clear (transparent) to frosted (matte).





# SLIDING DOOR

## Sliding door (optional)

The sliding doors save space and the use of optimal use, because the window does not open inside the room. The mechanism is operated without intervention via the handle. The sliding PVC door system is ideal for closing medium and large sized windows, provided with excellent wind and water tightness results (the same as a casement window). / acoustic, and tightness.

1. Polareiche 43, 2. Teak arte 65 3. Oregon 4-52, 4. Nubaum 21, 5. White, 6. Grey, 7 Dark grey, 8. Brown

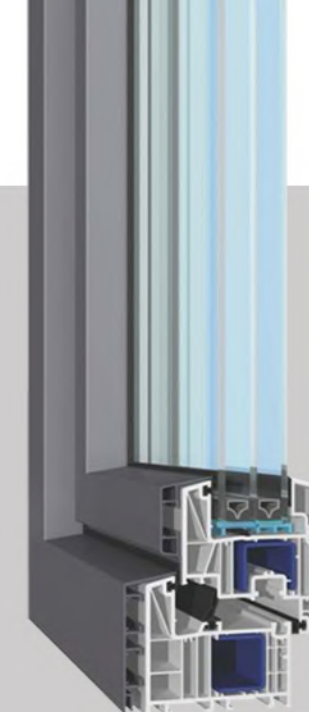
### Technical specifications

- Dimension cm 300x215
- Profile bluEvolution class A on the external wall thickness of 3 mm
- Available in the 6-chamber acoustic and thermal insulation variant
- Acoustic insulation 48 dB from external noise
- Construction depth of the profile: 82 mm
- Thermal insulation of the profile:  $U_f = 0,96 \text{ W/m}^2\text{K}$  with standard reinforcement
- Theft resistance Class 2 (DIN V ENV 1627)
- Estimated lifespan 50 years
- Galvanized steel treated armor of minimum 1.5-2 mm
- Insulating glass compatible: 44 mm (2 or 3 panes of glass)

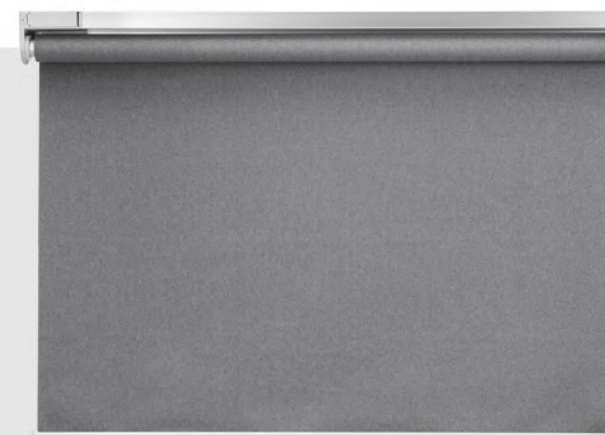


## Termica AL 82 (optional)

The plating of the profiles with aluminum makes it possible to combine the particularly modern details of the aluminum profiles with the technical advantages of the PVC profiles. The choice of colors can be made in the range of RAL colors. Termica AL 82, performance class A profile, is among the largest and most consistent profiles on the market. The high strength of the 82 mm series makes it possible to use it reliably even in the case of a set of frames with 4 glass plates.



## Roller blinds (optional)



The plain color roller blinds create an intimate environment by filtering the light and protecting from prying eyes.

Available with chain movement. Made entirely to measure, it will adapt to your fixtures.

Made with a polyester fabric, the blackout canvas features modern and elegant colors that do not change with exposure to sunlight.

The blackout roller blind creates total darkness when the canvas is lowered.

## Mosquito nets (optional)

The advantages offered by mosquito nets are: internal/external ventilation, visibility towards the outside with ecological materials. Mainly, mosquito nets have the practical purpose of preventing the penetration of insects.

The simple maintenance and adaptability to the assembly configuration allow the permanent exchange of air between the internal and external ventilation of the environment.







# HEATING AND COOLING

## HEAT PUMP + TRENCH HEATING

Reversible **HEAT PUMP** for air conditioning systems where, in addition to room cooling, high temperature hot water is required for heating or for the production of domestic hot water in every season in an efficient and sustainable way.

Work at full load up to -25°C outside air temperature in the winter season, up to 48°C in the summer season. Maximum temperature of water produced in heating 60°C. Adjustment, via Touch screen Control Panel

This type of **TRENCH HEATING** is used as primary/main source of space heating, and also as a cold air barrier under large glazed areas removing condensate.

All Hitte fans operate on a direct current with a safe voltage of 24 V, which not only provides high efficiency, but also a low noise level ideal making it ideal for your home. Hitte Fan-Assisted Trench Heating is a combination of heating and cooling for the summertime.

### Technical specifications

- Domestic hot water
- Inverter scroll compressor
- Inverter axial fan
- Plate heat exchanger
- Pumping group
- Compatible with the ModBus protocol
- Wifi
- Water produced up to 60 °C
- Heating up to -25 °C of outside air
- R32 refrigerant gas
- Touch screen panel
- Walkable aluminum case / trench heating



# WATER HEATING

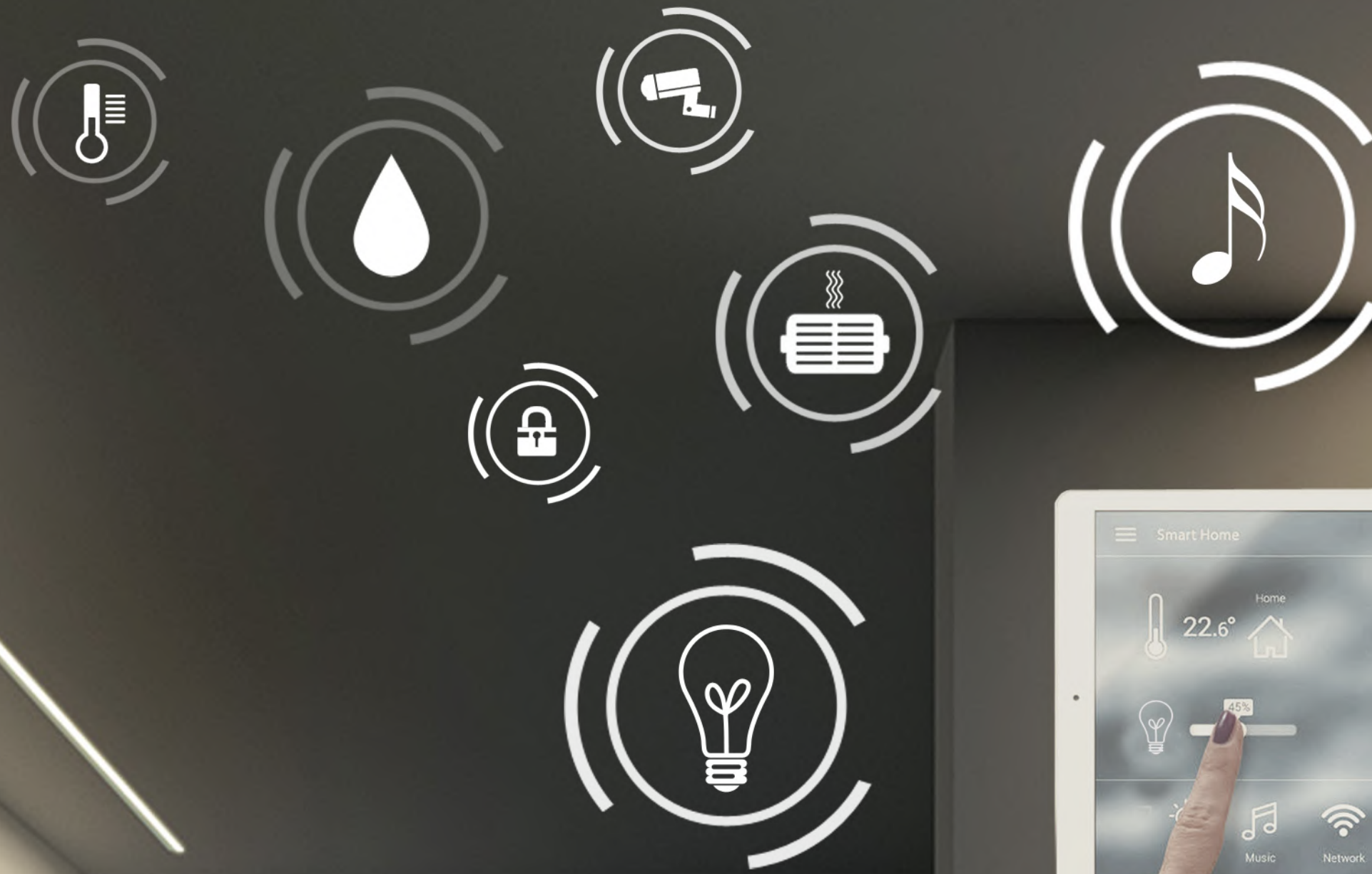
## CALDERA LYDOS HYBRID

The new and exclusive Hybrid Intelligence efficiently combines electricity and air, adapting to your needs and saving significantly compared to a classic electric water heater. The anti-noise and anti-corrosion enamelled electric heater, necessary for the production of hot water in case of need within a short time. The energy efficiency of the water Lydos Hybrid uses the energy of the air, transferring it to the water thanks to a thermodynamic cycle. The innovative i-Memory software learns your habits to effectively manage hybrid technology, the most convenient option between the use of energy and electricity. After a first learning phase, the memory is able to program the water temperature, in order to satisfy your needs saving time and energy. Always ensure the availability of hot water, memorizing your water usage habits for four weeks and adapting day to day to

### Technical specifications

- Capacity: 80 l.
- Power: 1,2 KW
- Average power consumption: 0,19 KW
- Maximum absorbed power: 1,42 KW
- Maximum operating pressure: 8,0 bar
- Air min / max temperature: 12/40 °C
- Sound power 49 dB
- Type of coolant R134a
- Energy rating: A





# SMARTHOME

The home automation kit transforms the A-FOLD houses in a smart environment. Lights, scenarios, heating and security will be intuitively controlled. Through a wall switch, a voice command or remotely via smartphone, tablet or PC, all domestic functions can be managed automatically according to a scheduled time, using the astronomical clock, or recalled by simply pressing a button.

The BASIC kit is included and others kit, CONFORT or VIP are optionals

## BASIC LIGHTS AUTOMATION

- O2IP Station MG Wireless, dual porta LAN e USB
- Postazioni comandi Batteryless Wireless removibile
- Outlet 10-20 A
- Led lighting strip 12-24 volt 3300/5300 Kelvin
- Switch WiFi gestione luci
- Dongle ricevitore Wireless Harvesting

## CONFORT *optional*

### BASIC AUTOMATION: A/C, LIGHTS AND POWER

- O2IP Station MG Wireless, dual porta LAN e USB
- User activation relay
- Single-phase energy meters
- Removable Batteryless Wireless control stations
- Outlet 220 V 10-20 A
- Led lighting strip 12-24 volt 3300/5300 Kelvin
- WiFi switch for lighting management
- Temperature sensor
- Wireless Harvesting Receiver Dongle
- Wifi relay device T3R wifi interface
- APP Mobile

## VIP *optional*

### AUTOMATION SLOOT: A/C, LIGHTS, POWER, AUDIO, AUTOMATION WINDOWS AND AIR QUALITY

- Light panel dimmerable smart multimedia gateway
- User activation relay
- Single phase energy meters
- Removable batteryless wireless control stations
- Outlet 10-20 A
- Led lighting strip 12-24 volt 3300/5300 Kelvin
- WiFi switch for lighting management
- Wireless Harvesting Receiver Dongle
- Wifi relay device T3R wifi interface
- Temperature sensor
- Wireless magnetic sensor for window control
- Smoke sensor
- Air quality sensor Co2-PM
- Video door entry system
- APP Mobile





# GREEN ENERGY

## SOLAR PLUS SYSTEM *optional*

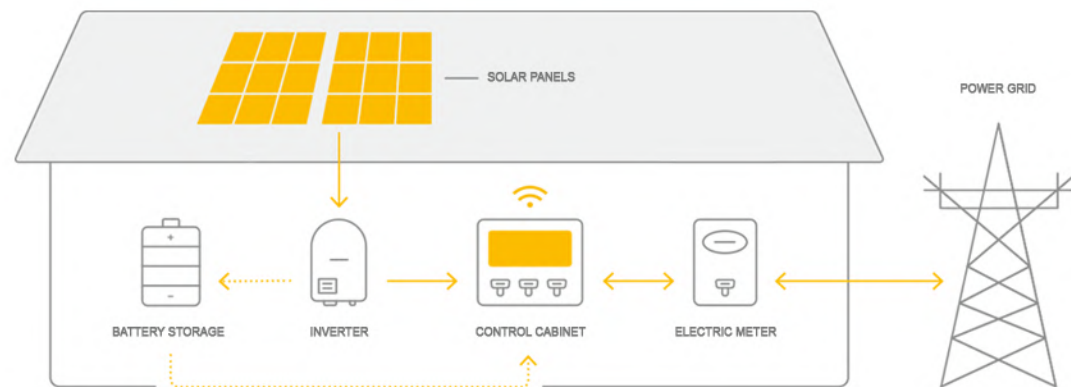
This System is composed of a photovoltaic panels, an accumulation storage and a control system.

The photovoltaic system is composed of panels installed on the roof, thanks to the chemical and physical characteristics of the silicon, they capture the sun's energy and transform it into electricity.

Use the best panels on the market that can maximize performance even in the presence of cloudy skies and north exposure.

The direct current (DC) generated by the photovoltaic panels is converted, with the use of an inverter, the storage system stores the surplus of installed electricity during the day.

The control system monitors 24 hours a day the amount of energy supplied by the system and by detecting the consumption of the house, it indicates the amount of energy necessary to guarantee 100% autonomy.



## Technical specifications

### PANELS

- Technology: monocrystalline
- Panel power: 320 Wp
- Solar system power: 3,20 kWp
- 5 busbar cell design
- Anti PID
- Higher power output
- Low temperature coefficient
- Efficiency:  $\geq 18.3\%$
- Tolerance:  $-0/+5W$
- 10 year manufacturing guarantee
- 25 year linear power warranty

### INVERTER

- Maximum efficiency 97%
- Maximum efficiency in all working conditions
- Up to 2 channels MPPT
- Interface WiFi / RS485 / Ethernet
- 10 year manufacturing guarantee

### STORAGE

- Capacity: 5 kWh or 10 kWh
- Lithium-ion batteries
- Maximum storage capacity
- 10 year factory warranty



## SCREW FOUNDATION optional

The screw piles system foundation consisting of metal poles to which spiral sectors are applied in order to obtain an element which, suitably driven into the ground, is able to provide a support point with predetermined characteristics of tensile and compressive strength. Screw posts in galvanized steel with cylindrical shape, in some cases with a final taper, which is inserted into the ground by screwing. The helical section along the body of the pile provides anchorage and facilitates insertion into the ground. The upper head of the pole, which remains outside the ground, consists of a steel plate on which the fixing elements suitable for connecting the pole with the structures to be supported are welded. The poles are introduced into the ground through a standard hydraulic drilling machine and, once fixed, they can support various types of structures intended to be used by the user. The type and size of the foundation pile are selected by the technical service according to the type of soil in which the foundation is to be built. The material used, always accompanied by certification, is carbon in quality S275JR and S355JR. The poles are supplied with a hot-dip galvanizing treatment and a very thick layer which guarantees corrosion protection and durability.



