



# CLT WOODEN HOUSE CONSTRUCTION





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## CLT



**ECOLOGICAL, INDIVIDUAL AND READY TO INSTALL**

MM crosslam cross-laminated timber is THE solid wood building material for modern and classical architecture.



## INSULATION OF FLOORS, CEILINGS AND ROOFS

### ROOF INSULATION WITH STONE WOOL



Effective and durable insulation of flat roofs and attics increases the energy efficiency of residential and non-residential buildings throughout their lifespan.

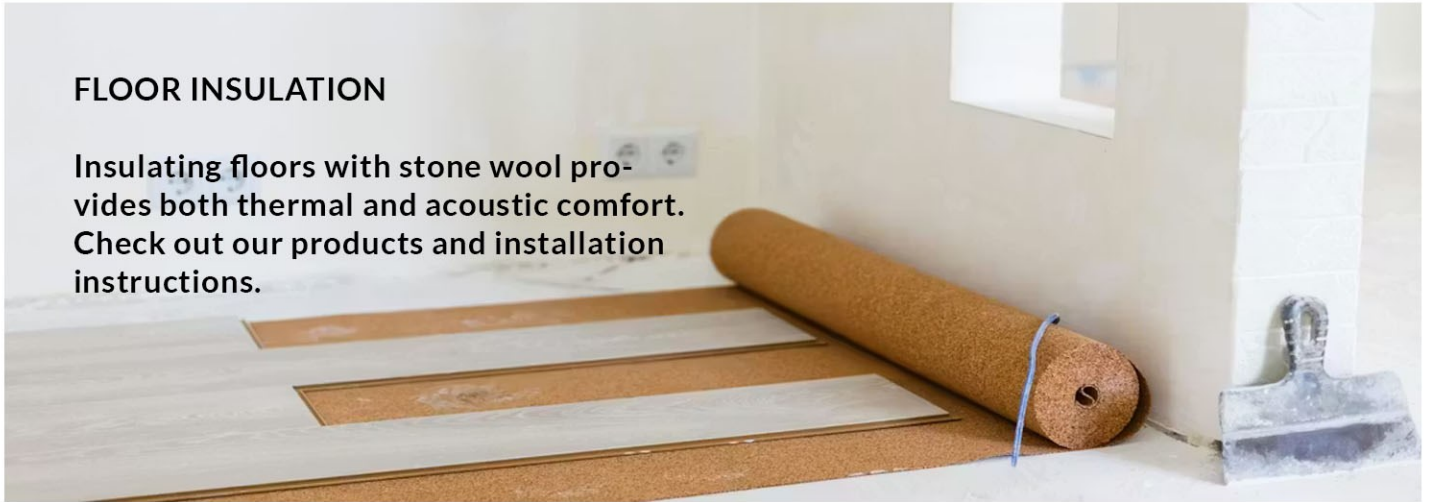


## ROOF INSULATION - CHOOSE ROCKWOOL STONE WOOL

A well-insulated attic or flat roof prevents heat loss from rooms in winter and overheating in summer. This directly translates into improved energy efficiency for the entire building, and consequently, lower heating and cooling bills.

### FLOOR INSULATION

Insulating floors with stone wool provides both thermal and acoustic comfort. Check out our products and installation instructions.



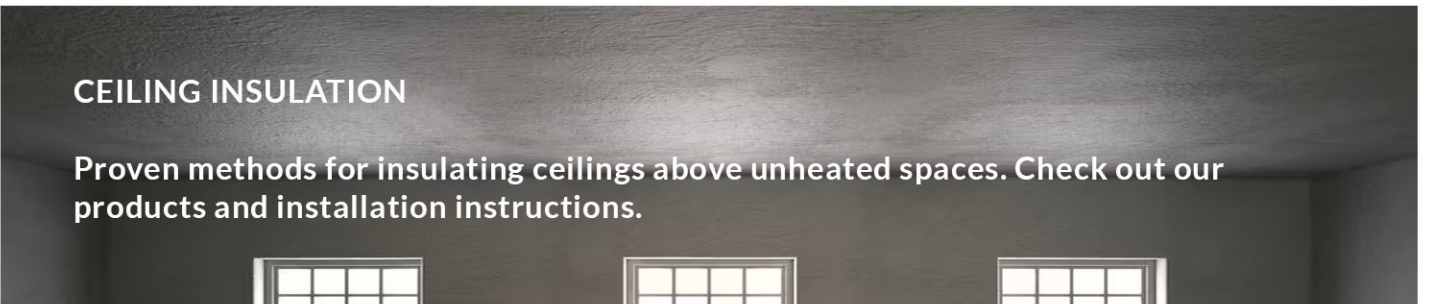
## ACOUSTIC AND THERMAL FLOOR INSULATION

Using stone wool as a floor insulation material ensures both thermal and acoustic comfort in insulated rooms, while also contributing to reduced heating costs. Therefore, stone wool improves living conditions and financial efficiency.

Using stone wool allows for floor insulation using both dry and wet methods.

### CEILING INSULATION

Proven methods for insulating ceilings above unheated spaces. Check out our products and installation instructions.



## HOW TO INSULATE A CEILING WITH STONE WOOL?

It's particularly important to thoroughly insulate ceilings above unheated rooms, such as garages and basements, as this is where heat escapes most quickly. This is worth ensuring, especially since ceiling insulation can be done quickly and inexpensively. Stone wool panels, which can be adhered to concrete ceilings and other bare surfaces using adhesive mortar, without the use of mechanical fasteners, are certainly up to the challenge.





## DRY SCREED - FERMACELL® 100% DRY AND READY FOR USE IN JUST ONE DAY

fermacell® dry screed elements consist of two 10 mm or 12.5 mm thick fermacell® gypsum fiber boards glued together. Dry screed elements are available with or without insulation layers. The elements precisely overlap, providing a smooth and solid base for your flooring project.



## READY FOR FINISHING WORK AFTER JUST ONE DAY

Compared to wet screeds, fermacell® dry screed elements are ready for use after just 24 hours.

24h

## 100% DRY SOLUTION

Dry screed elements do not introduce additional moisture into the building, so there is no risk of moisture problems, mold, or cracks.

## LOW INSTALLATION HEIGHT - INCLUDING UNDERFLOOR HEATING, FROM JUST 20 MM

Particularly when installing the fermacell® Therm25™ system, its low weight and 40% lower installation height compared to wet systems are advantages – even on wooden joist ceilings.



## FERMACELL® GYPSUM FIBER BOARDS IN TIMBER STRUCTURES

Wood has been a proven building material for centuries. However, with the Industrial Revolution in the 19th century and the ensuing shift from individual craftsmanship to industrial mass production, wood was displaced by new building materials produced in large quantities. Subsequently, timber construction remained a niche market for a long time. Meanwhile, timber construction has regained momentum. The pace of timber construction is steadily increasing.





Not only are more and more private investors choosing wood as a building material for single-family and semi-detached homes, but multi-story residential construction has also seen significant growth. Even non-residential buildings, such as kindergartens, schools, nursing homes, and offices, are now being constructed from wood. For multi-story extensions, timber construction offers primarily static advantages. Hybrid construction methods, combining the advantages of traditional/massive construction with those of wood, are becoming increasingly popular in multi-story construction.

fermacell® gypsum fiber boards complement the advantages of wood as a building material with their material properties, which are similar to those of wood, and their rapid processing characteristics. Furthermore, they offer decisive advantages when compared to other building materials, such as wood-based panels.

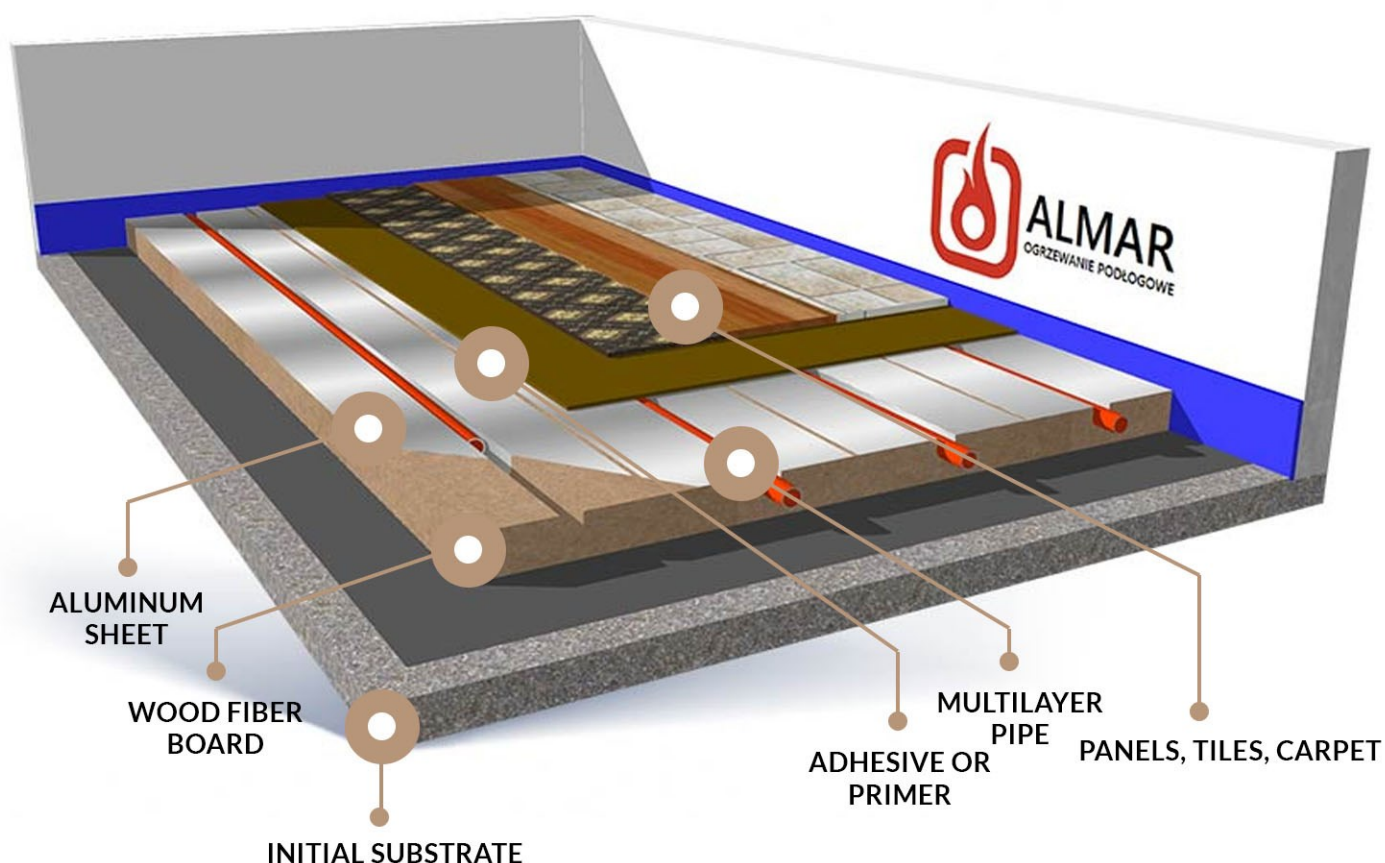






## ALMARSYSTEM BIO

The innovative and easy-to-install Almarsystem Bio for underfloor heating can be used anywhere ceiling soundproofing is important. Underfloor heating on an acoustic wood fiber panel provides excellent acoustic and thermal insulation. The panels are available with either aluminum foil or sheet metal facing.



## WHAT MAKES THAT OUR FLOORING GAINED CONFIDENCE?

- We differ and that's what customers expect
- Widest range of underfloor heating  
Low floor heating – from 18 to 50 mm
- Free quote and design for underfloor heating
- Attractive price
- Exclusively Polish capital





Innovative waterproofing for flat roofs, terraces and balconies. Combines the robustness and durability of EPDM with the convenient installation on the roof. In addition, AlphaThor roofing membrane is reinforced with fibreglass mesh, which gives it high tear strength. Joining of belts is possible by simple hot air welding on the roof.

AlphaThor can also be full-surface bonded to any substrate on almost any flat roof.



## SPECIFIC PARAMETERS OF ALPHATHOR

Very good resistance to UV radiation and ozone

### Extra accessories to the AlphaThor:

- Adhesive primer
- System adhesives
- EPDM non-reinforced membrane for finishing
- EPDM internal and external corners

### AlphaThor is available in the following sizes:

- Membrane size: 1,01 m x 20 m
- Membrane thickness: 1,8 mm

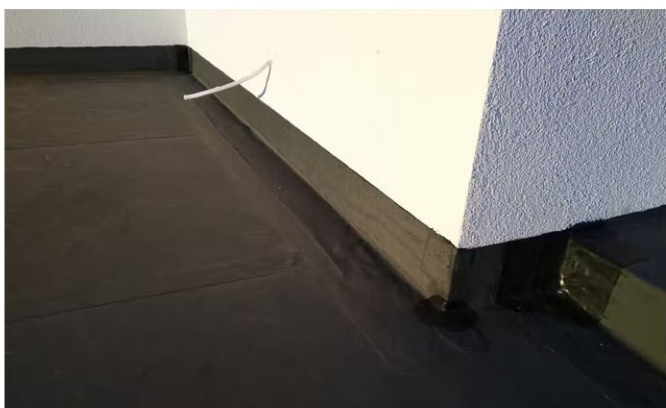
### ALPHATHOR SELF-ADHESIVE IS AVAILABLE IN SIZES:

- Diaphragm size: 1.01 m x 15 m
- Membrane thickness: 2.04 mm

### COLORS:

- graphite
- white (snow)







## SYSTEM DESCRIPTION

A system for creating terraces and balconies with a ventilated floor made of 2 cm thick ceramic tiles on SMART non-adjustable terrace supports or, optionally, on RENOPAD PRO 13-18 mm adjustable supports.

- This system allows for creating sloped floors, parallel to the subfloor, and is recommended for large terraces and balconies.
- Effective water drainage thanks to the innovative design of the W30 profile, equipped with large drainage and overflow holes that prevent leaves and other debris from blocking the drain.
- The special, notched version of the W30 eaves profile allows for use on terraces and balconies with arched eaves.
- The system is fully compatible with both SMART non-adjustable supports and RENOPAD PRO low-profile adjustable supports.

## ELEMENTS OF THE BASIC W30 SYSTEM







BS VARIANT 1

The aluminum post-and-beam balustrade system is designed for installation on balconies, terraces, loggias, and mezzanines. It is available in two versions: with a safety glass infill mounted in point brackets or with an HPL panel mounted in the profile.

- The balustrade consists of structural elements, including rails, posts, connecting screws, and a handrail. The infill is mounted point-mounted in brackets. The infill consists of 8.76 mm thick, laminated 44.2 mm safety glass.
- As an alternative to glass, the filling can be 8 mm thick HPL boards.



BS VARIANT 2





## UNCOMPROMISING DURABILITY

We design joinery that stands the test of time and changing conditions, ensuring peace of mind for years to come.

## PERSONALIZATION WITHOUT LIMITS

We give our customers the freedom to choose and customize each design—because every space is unique.

## ENVIRONMENTAL RESPONSIBILITY

We prioritize eco-friendly materials and processes to ensure our products are friendly to the planet and future generations.







## WHITE INDOOR UNITS

Pure white, accented by an elegant black stripe with a perfectly integrated controller, adds a unique aesthetic to any interior.

The internal design of the units retains all the strengths of previous generations, maintaining the spirit of Panasonic Aquarea heat pumps.

The All-in-One model, with dimensions of 598 x 600 mm, offers considerable compactness, comparable to standard household appliances.

## ANTHRACITE GRAY OUTDOOR UNITS

The anthracite gray outdoor units perfectly complement current trends and complement any architecture.

The new models offer low noise levels and comply with safety standards for the use of natural R290 refrigerant.

The front grille offers improved aesthetics by reducing the visibility of internal components.



### INDOOR UNIT DESIGN

A refreshed, compact design easily integrates with the décor and space of a kitchen or laundry room.



### SPECIAL FEATURES

Built-in water pressure sensor, U-Vacua™ insulation, easy Wi-Fi installation, and integration with a heat recovery unit.



### EASY INSTALLATION AND MAINTENANCE

Easier access to internal components, factory-installed magnetic filter.



### IMPROVED CONNECTIVITY WITH THE ADDITIONAL CN-CNT CONNECTOR.

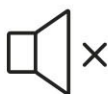
Simultaneous operation of Aquarea Smart Cloud and BMS is possible.

# HEAT PUMP AND AIR CONDITIONING



## OUTDOOR UNIT DESIGN

Uniform anthracite gray color, with additional Bluefin heat exchanger finish.



## QUIET OPERATION

Noise level reduced to just 56 dB(A) according to ERP\*  
\*9 kW output



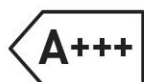
## EXTREME CONDITIONS

A compressor that operates in low outdoor temperatures down to -25°C.



## BLUEFIN PROTECTION

Bluefin anti-corrosion coating on the external heat exchanger protects against harsh environmental conditions.



## HIGH EFFICIENCY

Energy Class A+++ with a SCOP of 5.12\*  
\*L Series 5 kW



## INTELLIGENT BIVALENCE

Economical, bivalent operation with optimized energy tariff logic.



## PV READY

Smart Grid ready to work with a photovoltaic installation.



## INCREASED CONTROL

Dual-zone version and the ability to connect 2 controllers.

**5,12**  
SCOP

**-8**  
dB(A)



## SUPERIOR COMFORT AND EFFICIENCY

Lower noise levels and greater efficiency make the new generation of Aquarea K and L series heat pumps stand out with significant technological improvements while maintaining the strengths of the previous Panasonic heat pump range.

The new generation achieves an excellent SCOP of up to 5.12, ensuring efficiency and reliability in low temperatures, while offering a wide range of units suitable for all climates and building types – both new and renovated.





The K and L series feature reduced noise levels, up to 8 dB(A) less than previous models. This advantage makes installation more flexible, offering greater options for outdoor unit location.



## Panasonic



### K SERIES

- The ideal solution for new builds,
- R32 refrigerant,
- F51 connection between the indoor and outdoor units with refrigerant gas,
- Produces supply water temperatures from 60°C to -10°C outside temperature,
- T-CAP and High Performance versions available for more demanding climates,
- Improved design with a new indoor unit complements the aesthetics of any home; seamless integration with the anthracite gray outdoor unit,
- Excellent connectivity integration, with the option of connecting a Wi-Fi module to the indoor unit.

### L SERIES

- Ideal for retrofit applications, when renovating a home with existing radiators,
- Using natural R290 refrigerant,
- Hydraulic connection between the indoor and outdoor units,
- Produces supply water temperatures up to 75°C down to -10°C outside temperature,
- Domestic hot water up to 65°C without a tank sterilization heater,
- Improved design with a new indoor unit complements the aesthetics of any home; seamless integration with the anthracite gray outdoor unit,
- Perfect connectivity integration, with the option of connecting a Wi-Fi module to the indoor unit.



Personalized comfort,  
cool or warm air,  
just the way  
you like it.



\*This scene is a simulated scenario and may vary depending on country or usage.

## LG ARTCOOL GALLERY LCD AIR CONDITIONER | 2.5KW

### Key Features

- Create a Home Art Gallery in Your Home
- Create your own home art gallery
- Transfer your most treasured moments from your phone to your air conditioner.
- Sync your phone with your device
- Convenient mobile widgets
- Convenient remote control



## LG DUALCOOL AI AIR PREMIUM AIR CONDITIONER | 2.5KW

### Key Features

- Create a Home Art Gallery in Your Home
- Create your own home art gallery
- Transfer your most treasured moments from your phone to your air conditioner.
- Sync your phone with your device
- Convenient mobile widgets
- Convenient remote control



## LG ARTCOOL AI Air Mirror air conditioner | 2.5kW

### Key Features

- Sophisticated design, timeless style
- AI Air, DUAL Vane, ect.

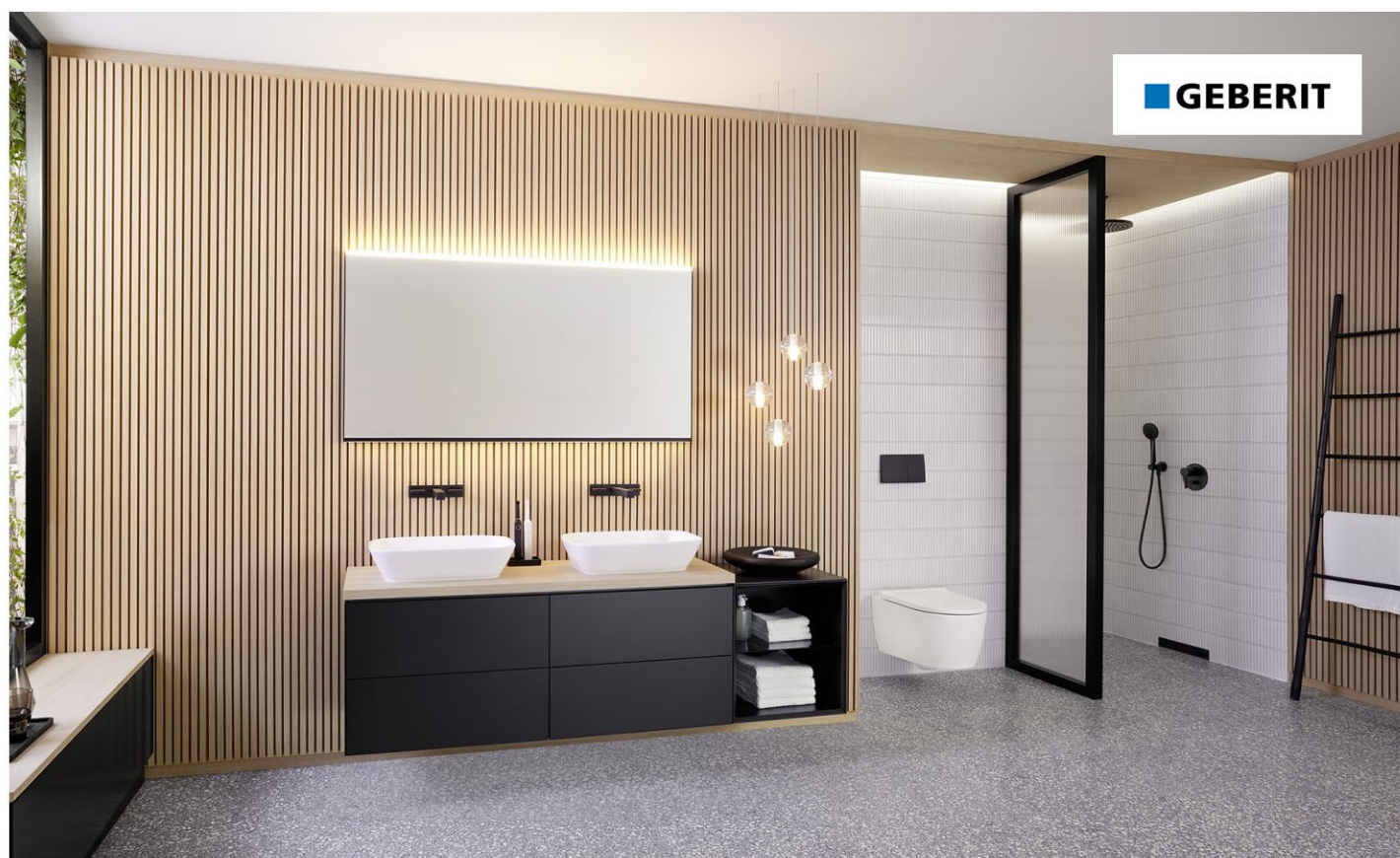






## FOR EVERY SPACE WHERE WATER MATTERS

From the serene sanctuary of the bathroom to the dynamic heart of the kitchen, we design solutions that elevate every experience with water. Discover precision-crafted products designed for life, delivering seamless integration for professionals while bringing Pure Freude an Wasser – the pure joy of water – to every home.



### RESTROOM AREA

WC System  
Bidets



### WASHBASIN AREA

Washbasin Faucets  
Washbasin Siphons  
Washbasins



### SHOWER AND BATHTUB AREA

Showers  
Bathtubs and Drain Kits



### OTHER SYSTEMS

In-Wall Frames  
Water and Sewer Systems

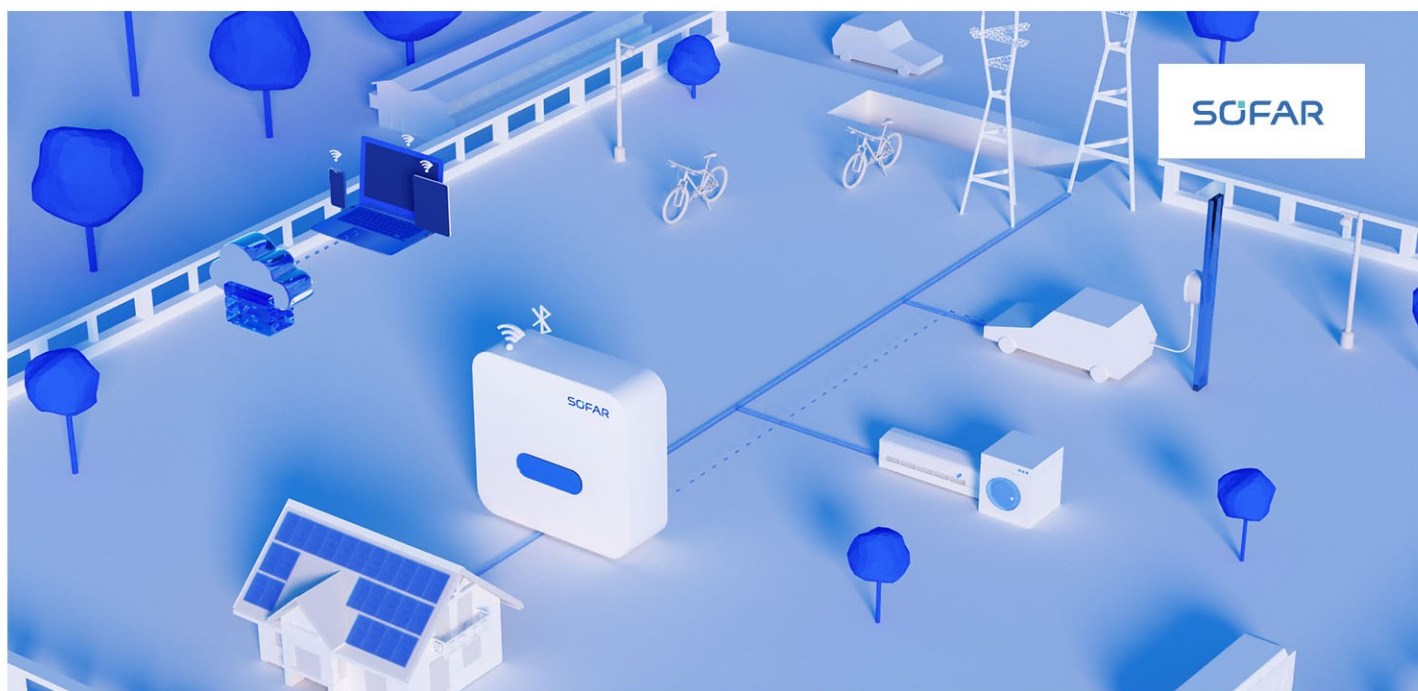


We equip all our homes with branded household appliances from brands such as:

- Samsung
- LG
- Bosch
- Siemens
- Electrolux
- Whirlpool



### PHOTOVOLTAICS



SOFAR inverters (SOFAR 1-3.3KTL-G3, SOFAR 3-6KTLM-G3, and SOFAR 3.3-12KTLX-G3 models) are modern photovoltaic inverters, available in single-phase and three-phase versions, with 1 or 2 MPPT configurations for optimal energy yield. The G3 series offers high efficiency (up to 97.7%) and a maximum MPPT/DC input current of up to 15A, enabling efficient operation with a wide range of PV modules.







## SOFAR 1-3.3KTL-G3

Single-phase / 1 MPPT / Max. efficiency: 97.7%

- Lightweight, quick, and easy to install
- IP65 design for outdoor use
- RS485
- Built-in zero export function
- 140% DC overload
- Optional: Wi-Fi/Ethernet



## SOFAR 15-24KTLX-G3

Three-phase / Dual MPPT / Max. efficiency: 98.6%

- Intelligent string level monitoring
- 110% sustained overload capacity
- Type II SPD for DC and AC sides
- Low starting voltage, wide MPPT voltage
- Maximum DC input voltage of 1100V
- Remote firmware upgrade



## SOLAR PANELS

*Solar*  
**Jinko**



### TIGER Neo

66HL5-BDV

700-720 Watt

BIFACIAL MODULE

N-type



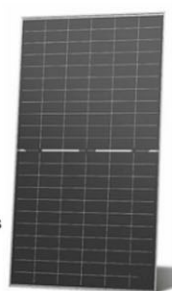
### TIGER Neo

66HL4M-BDV

625-650 Watt

BIFACIAL MODULE WITH DUAL GLASS

N-type



### TIGER Neo

54HL4R-(V)

435-460 Watt

MONO-FACIAL MODULE

N-type





**PLEASE CONTACT US.  
WE WILL ADVISE YOU AND ANSWER  
ALL YOUR QUESTIONS.**



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