21 ADD

Designed by Your Nature

Modular Single-Family Home

97 m² / 4 rooms

- → Proprietary air recovery system
- → Automatic home and energy management
- → Natural sources of heat, electricity, and water

The 21 ADD home was developed operating under the pre-commercial procurement in a research and development formula by the EU award winning Polish National Centre for Research and Development

European Funds Smart Growth

Republic of Poland

NCBR National Centre for Research and Development

European Union European Regional Development Fund

Living in a 21 ADD home is easy, energy-efficient and ecological

Our aim is to craft homes where residents can thrive, emphasizing both comfort and sustainability. By integrating eco-friendly solutions, we ensure harmony with the natural environment while prioritizing the well-being of those who call our homes theirs.

Sustainable energy solutions

Solar Panels
Harness the sun's energy to generate electricity that covers your entire power needs.

Energy Storage Systems
Store the surplus energy produced on sunny days, ensuring you always have a reliable power supply.

Heat pump
Residents have an independent and efficient source for both heating and cooling.

Water treatment solutions

Wastewater treatment
We treat wastewater using a two-stage process, including a reed bed system, making it safe for toilet flushing and watering the garden.

Rainwater harvesting
The system collects rainwater and purifies it, providing enough water for monthly household needs.

Connection
In the future, if you get permission for a wastewater treatment system, the basic setup will be ready to connect to the water-saving system.

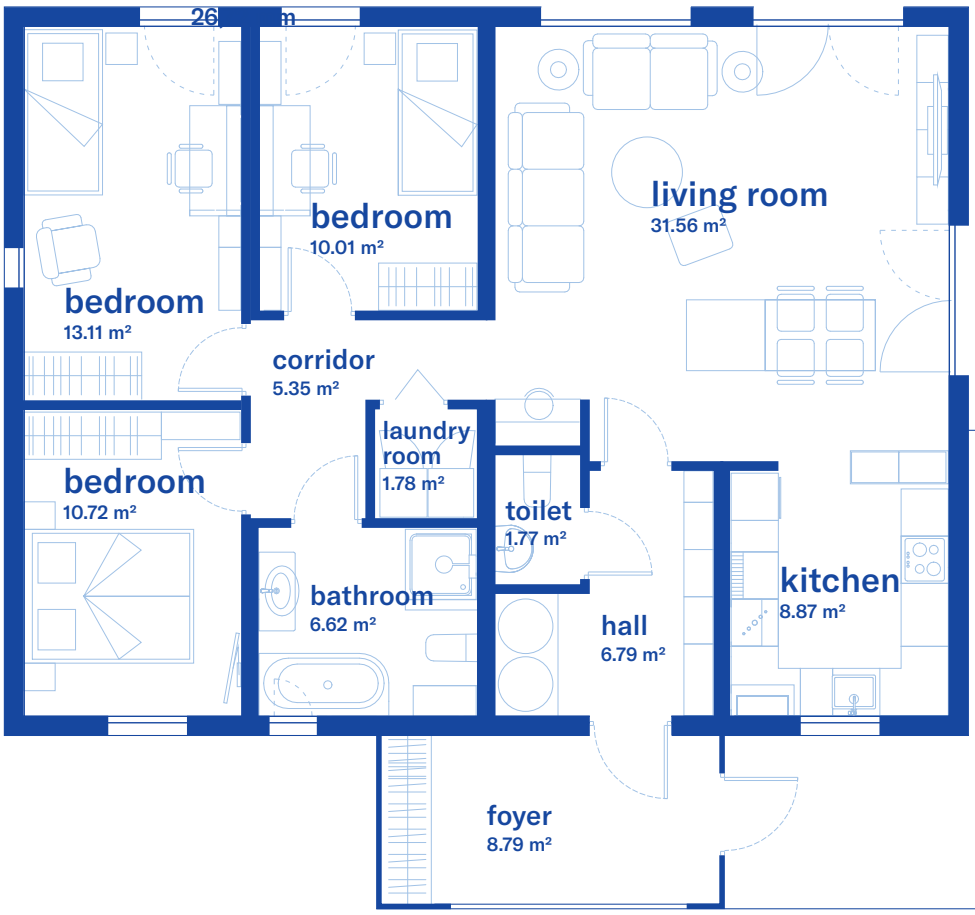
Proprietary ventilation system

Ask about our proprietary recuperators

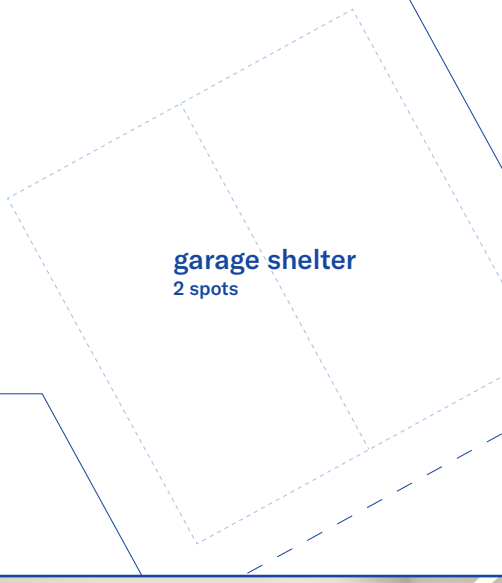
Health
Our ventilation system supplies the entire house with fresh, purified air. The high-grade filters eliminates even 99% of pollutants.

Comfort
The system regulates air humidity and CO_2 levels in the rooms. It also enables humidity recovery from air extracted from the room.

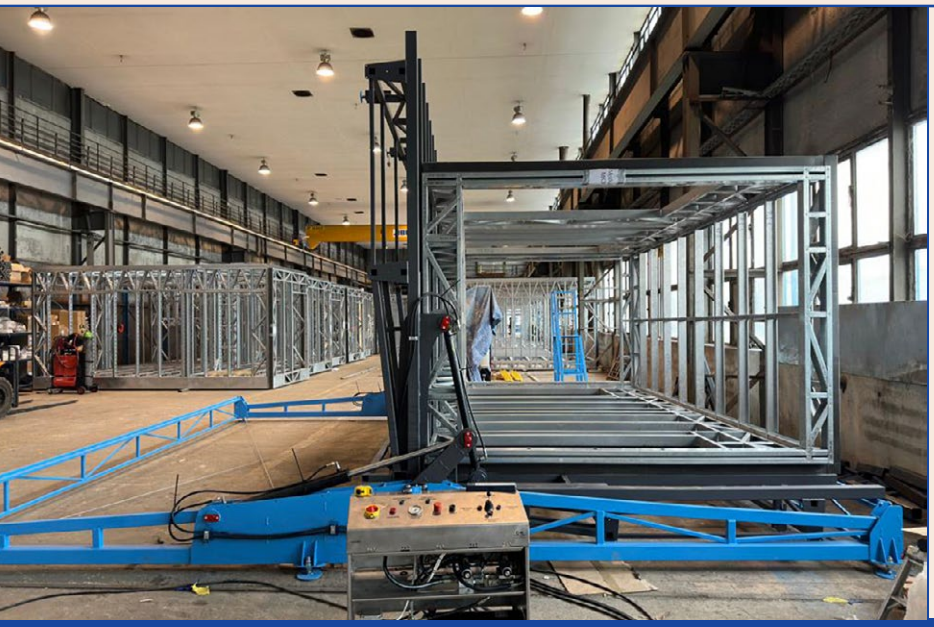
Temperature
For a comfortable and even distribution of temperature, we implement capillary mats throughout the rooms.



Usable area	96.58 m²
Buiding area	123.86 m²
Number of floors	1



21 ADD Modular Home – Single-Family



Technology

Our modular building is made with lightweight steel frame technology filled with SGW, a mortar mixture of our design. The construction is:
→ highly shock-resistant,
→ sealed,
→ soundproof,
→ fire-resistant.

Our unique technology allows for full integration of renewable energy sources – this has a direct impact on environmental parameters.

Production

Efficient Process

Controlled and closed production process allows for greater precision and efficiency in production compared to traditional on-site construction methods.

Less Waste

Since modules are built to precise measurements in a factory setting, materials can be optimized, and excess waste minimized.

Enhanced Safety

Indoor construction in out factory protects workers from weather and traditional construction process hazards and ensures stricter adherence to safety protocols.

Quality Control

Stringent inspections at every stage of our process guarantee consistently high-quality buildings with fewer defects.

Environmental parameters

data for the Polish climate zone (III)

total electric energy consumption of the building	**79.59** kWh/m²/year
final energy (EK) the amount of energy to be purchased for heating, preparing domestic hot water, and ventilation purposes	**25.3** kWh/m²/year
primary energy for ventilation, heating, and domestic hot water (EP) the amount of energy directly obtained from non-renewable natural resources	**0.0** kWh/m²/year
excess energy produced our building has a potential to generate more energy than it consumes, which can be later sold back to the grid	**55.06** kWh/m²/year

usable energy for heating and ventilation (EUco)	**14.8** kWh/m²/year
water balance almost full water consumption savings from the grid with sewage treatment and utilization of rainwater	up to **88** %
carbon footprint of building materials carbon footprint of the building materials used up to the shell and core state, calculated per 1 m² of the total surface area	**217.68** kg CO_2/m²
recycling of building materials the share of materials originating from recycling in the building's structure	**46.40** %

Contact us

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