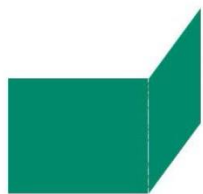




# GREENPANEL INNOVATIVE HOMES





**GREENPANEL**  
INNOVATIVE HOMES

## Offices

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[www.green-panel.eu](http://www.green-panel.eu)

## Factory

Innovations Business Park  
Gladiolelor Street B12 Plot. 077090 Clinceni,  
Ilfov County, Romania  
Phone: +40 21 369 30 73

# OUR AIM

We promote a new concept in construction and provide an alternative building solution. We offer our clients an integrated building system:

- Construction materials: the complete Structural Insulated Panel System
- Design support
- Technical support on site
- Construction on site. All stages up to the turn-key building (cast concrete base necessary)
- Construction method training

Our products are designated to meet the needs of each customer, from self-builders to large developers, from private companies to public institutions.

The primary focus of our company is the promotion of per-engineered solutions for the construction of buildings as well as the efficient thermal insulation of buildings that are constructed using traditional building methods.

Our goal is to manufacture environmentally friendly products and systems for construction, providing a higher standard of living and introducing a new level of safety and quality.



# SERVICES

1. **STANDARD SIZE MATERIALS** - We can provide you with our products: SIP, EVOTHERM PLUS/O, DIP, in standard dimensions.
2. **TAYLOR MADE MATERIALS** - Based on your architectural plans we can pre-cut our products to the desired size, ready for you to install. Technical support can be offered if needed.
3. **CUTTING AND ASSEMBLING** - Based on your architectural plans, we will cut the materials and our expert team will visit the site and complete the structural work of the building (cast concrete base necessary).
4. **TURN-KEY** - We take care of everything needed, removing all the worry and hassle. Our technical department will undertake the work necessary and together with our strategic partners will offer you the most competitive prices for everything needed to complete your home.

Our SIPs are manufactured under factory controlled conditions and are custom designed for each home or building. They are available in a variety of thicknesses according to the needs of various regions and projects.



# WHY OUR SIP?



## Safety and Strength

Sip buildings are significantly superior to conventional framed buildings



## Cost Effective

Predictable cost, 30% less than conventional building methods



## Energy Efficiency

With our SIP you can save up to 50% of your utility bills



## Time Saving

SIP technology offers an accurate delivery date of your building



## Design Flexibility

Our SIP can give you unlimited design possibilities



## Sustainability

No heavy industry production of steel, cement and aggregates



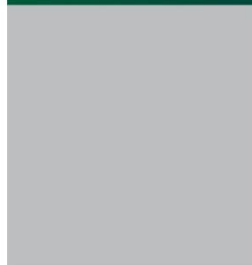
## Acoustic Insulation

Our SIP reduces sound by 38 dB



## Health

Precise control over the indoor quality of your home





# STRUCTURAL INSULATED PANEL

## SIP IS A LOAD BEARING WALL WITH EXCELLENT INSULATION PROPERTIES

The cost and speed of erection, the structural and thermal performance of the SIP are ahead of almost any current alternative.



SIPs are now beginning to make a bigger impact within the construction industry, as self-builders and developers strive to find economic and energy efficient alternatives to the more traditional methods in order to comply with the ever tightening Building Regulation requirements for improved U values and air tightness.

SIP panels are made up of a rigid (PIR) foam core, sandwiched between two structural skins of Oriented Strand Board (OSB) an "engineered wood" product. The result is a building system that is very strong, energy efficient, and cost effective.

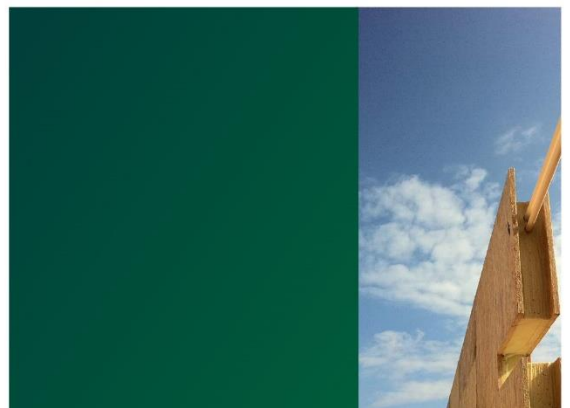
Our factory produces the rigid PIR foam core on which various materials such as OSB, MGO (magnesium oxide) board, Gypsum board are bonded together and delivers a daily capacity of approximately 1200 sqm of panels.



# ADVANTAGES OF USING SIP

These innovative structures incorporate beauty and simplicity into relatively low-cost houses.

- The structural integrity of SIP buildings is significantly superior to a conventionally framed building
- SIP is fully designed and fabricated in controlled factory conditions, ensuring accurate dimensions and tolerances. Therefore the end product arrives on site accurate and defect free. This assures the quality of your building.
- SIP constructions are certified for 60 years lifespan, while the concrete buildings have a scientific lifespan of 50 years.
- Our SIPs have been tested and classified as an effective fire resistant element.
- Construction cost and quantity of materials are calculated with accuracy minimizing cutting and fabrication on site. This guarantees that no unexpected costs will appear.
- Building with SIP reduces the cost by 30% compared to conventional building methods.
- Less work specialties are needed and less transportation of materials.
- With our SIP you can save up to 50% of your energy bills.
- Because SIPs create a tighter building envelope than conventional insulation, you can actually reduce the size of heating and cooling equipment.
- SIP building is virtually airtight, giving the occupants full control over the interior environment. This energy efficiency will become increasingly important as the cost of heating fuels inevitably increase.
- You save over 60% of time to complete your house, compared to the conventional building methods.
- Erection time is known in advance. Therefore SIP technology offers an accurate delivery date of your project.
- Our SIP gives you unlimited design possibilities, as well as circular walls, curved roofs and domes.
- Changes can be made to existing properties: extra rooms, levels and attics, within a short time, in order to reach the final desired result.
- Possibility of adding extra rooms or modifying existing ones fast and easy.
- SIP technology sustains the earth's natural resources.
- No heavy industry for producing steel, cement, aggregates, bricks etc.
- SIP System is highly compatible with photo voltaic and solar systems, very close to zero energy buildings.
- SIP reduces sound by 38 dB, SIP + Gypsum Board by 55 dB and SIP + Evotherm by 62 dB equivalent to a recording studio specifications.
- Our floor system with the use of rock wool and sound absorption tape and membrane, reduces sound by 55 dB.
- The floor rigidity eliminates vibrations.
- Residents of SIP homes and buildings report a high level of comfort. Heating and cooling is more evenly distributed in a SIP building without the hot and cold spots found in conventional buildings.
- Our panels are airtight giving you precise control over the indoor air quality of your home, which helps keeping out allergens, humidity, dust, etc.



# SIP USES

## SIPs can be used for:

- Residential buildings
- Commercial buildings
- Industrial buildings
- Specialized buildings: Schools, Hospitals, Churches, etc.
- Extension of the existing buildings — horizontally and vertically

## Residential buildings

SIP provides the best possible construction techniques for a new home. By offering a perfect insulated structure, with very low utility bills, modifiable room space and a quick and predictable building program, SIP meets the stringent standards and is officially recognized by all industry bodies.

## Commercial / Industrial Buildings

- Flexible design — any modifications can be easily completed (existing spaces can be both divided or expanded as needed)
- Fast construction method — quick execution
- Cost efficient solution

## Specialized Buildings – Public Sector

By demanding low U-value and low long term running costs, the Public Sector ensures that the buildings they commission not only offer the best value for money, but also deliver industry's best practice in respect to environmental and socio-economic responsibility.

## SIPs are suitable for ANY type of geographical area:

- Mountainous
- Hilly
- Plain





# TECHNICAL DETAILS

## SIP

Our SIP panels are made up of a rigid (PIR) foam core produced by us and injected between two structural skins of Oriented Strand Board (OSB) an "engineered wood" product. The result is a building system that is very strong, predictable, energy efficient, and cost effective.

### Dimensions

Width: 1220 mm (min) – 1250 mm (max)  
Length: 2500mm, 2800mm, 3000mm–  
walls  
Thickness: 120 mm, 150 mm, 180 mm,  
210mm, 240 mm

## OSB

A biodegradable "engineered wood" product of the highest quality, provided by Egger.

ECO and environmentally friendly product made of renewable, farm-grown young trees.

### Dimensions

1250mm x 2500mm  
1250mm x 2800mm (by order)  
1250mm x 3000mm (by order)

### Features

Thickness: 15 mm x2 (for walls)  
Thickness: 18-22mm x2 (for floor)  
Thickness: 12mm x2 (for roof)  
Density : 650kg/m<sup>3</sup>

## PIR

We produce PIR Foam by non toxic raw materials, developed and provided by BAYER.

### Features

Thermal conductivity 0,021 W/m/K  
U value 0.22w/m<sup>2</sup>/K (for SIP 120mm)  
Thickness: 90 mm, 120 mm, 150 mm,  
180mm, 210 mm  
Density: 46 kg/m<sup>3</sup>

Rigid insulation is used as solid component insulation in almost every industry for its inherent efficiency and lack of air movement. These attributes are built right into a SIP building. Less air leakage means fewer drafts, less noise, lower energy bills, and a much more comfortable indoor environment.



# EVOTHERM

## **GREEN PANEL provides you with a GREEN and NEW insulation solution**

EVOTHERM is created by ecological standards and combines thermal and acoustic insulation. It is a NEW integrated insulation system for the whole cell of the building.

### **EVOTHERM comes in two types:**

- EVOTHERM PLUS used for walls only
- EVOTHERM O used for inclined or flat roofs, light metal structures and timber framed walls.

Increased strength and resistance during seasonal weather change, allowing natural thermal expanding and contracting all through the year.

The panels can be easily fixed to any surface, no matter the shape. Panels can be specially produced for any type of structure. If the surface of the wall is not perfect, it does not require supplementary repairs. EVOTHERM panels sufficiently fix and cover any surface. It doesn't distort or deform through time, keeping its insulation properties intact.

The low weight of the panels has a minimum effect on the overall weight of the building.

## **EVOTHERM can be used for:**

- Residential buildings
- Commercial buildings
- Industrial buildings
- Public buildings

EVOTHERM panels are manufactured and delivered to the desired shapes.

The panels are mounted on the exterior surface of any type of building by simply applying the supporting bolts to the designated supporting base (wall, frame, etc).

Anyone can use EVOTHERM – it is simple, fast, and efficient

## **EVOTHERM FEATURES**

- Green product
- Thermal insulation
- Acoustic insulation
- High fire resistance
- Architectural flexibility
- Time efficient
- Cost efficient



# EVOTHERM PLUS

Panels only for walls



2 skins of MGO board + PIR foam

## Dimensions

- Width: 610mm
- Length: 2440mm
- Thickness: 50 mm (min), 90mm (most usual).

**PIR foam** produced by us from raw materials developed and provided by BAYER.

## Features

- Density: 46 kg / m<sup>3</sup>
- Excellent thermal conductivity (0.021 W/m/K).
- Offers a continuous insulating process, without thermal bridges.
- Its insulating properties are preserved for much longer than those of other insulating materials or alternative methods.

## EXTERNAL INSULATION

### MGO Dimensions

- 610 mm x 2440 mm
- Thickness: 9/12 mm x 2 skins

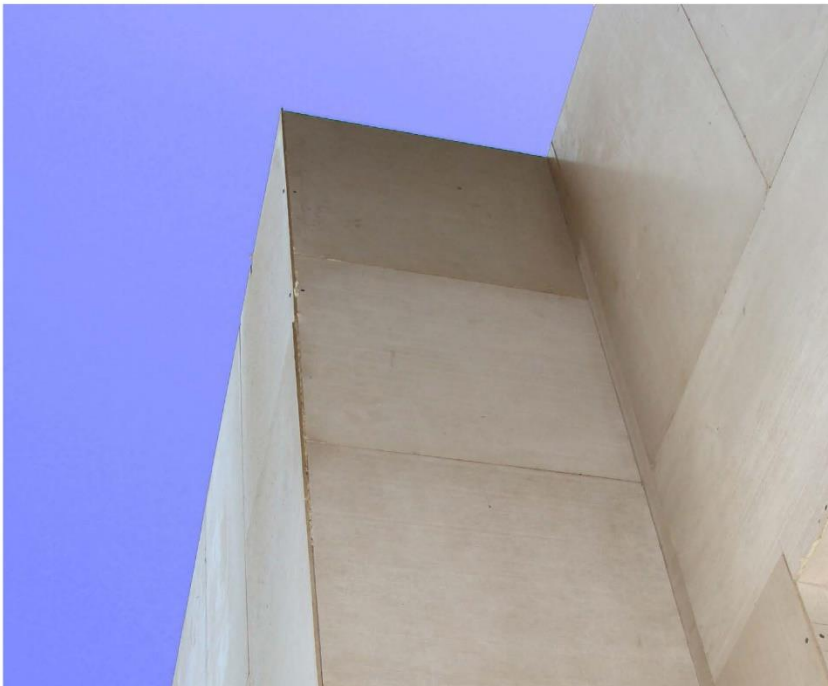
Fire resistance rating REI 90/90/90

## INTERNAL INSULATION

### Gypsum Board Dimensions

- 610 mm x 2440 mm
- Thickness: 9/12 mm x 2 skins

Fire resistance rating REI 30/30/30



# EVOTHERM O PANEL

For inclined and flat roofs, also as sheathing insulation for light metal structures and timber frame walls

1 skin of MGO board + PIR foam + 1 skin of OSB

## Dimensions

- Width: 1220mm
- Length: 2440mm
- Thickness: 50 mm (min), 90mm (most usual).

**PIR foam** produced by us from raw materials developed and provided by BAYER.

## Features

- Density: 46 kg / m<sup>3</sup>.
- Excellent thermal conductivity (0,021 W/m/K).
- Continuous insulating process, without thermal bridges.
- It's insulating properties are preserved much longer than those of other insulating materials or alternative methods.

## 1 skin of MGO facing the exterior

### Dimensions

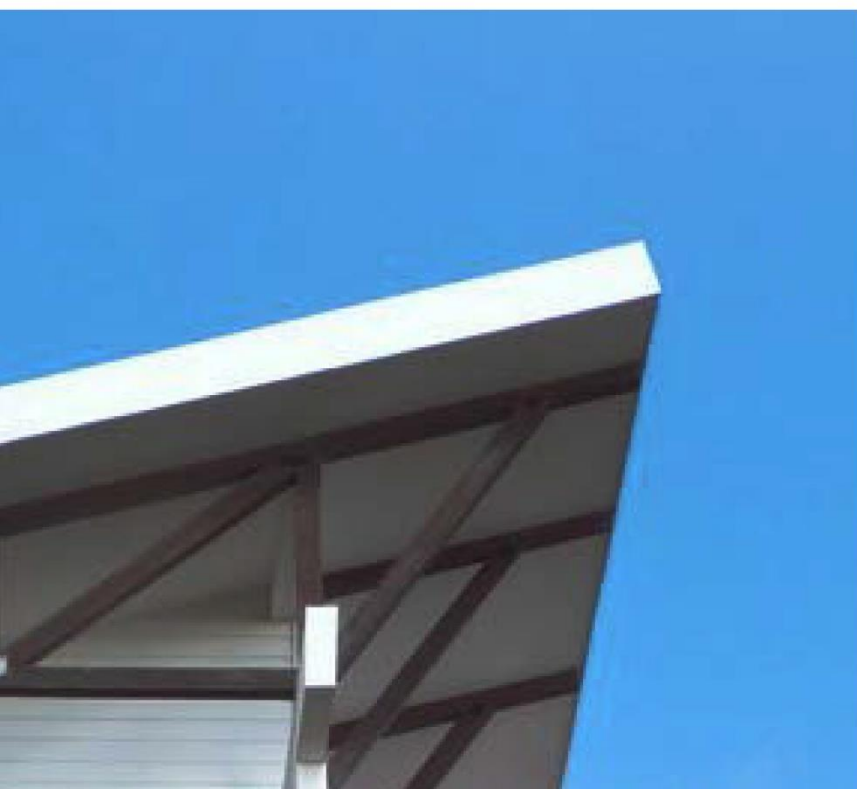
- 1220mm x 2440mm
- Thickness: 9/12mm

MGO has fire resistance rating REI 90/90/90

## 1 skin of OSB facing the interior

### Dimensions

- 1220mm x 2440mm
- Thickness 12mm







# DIVIDING INSULATED PANEL

2 skins of Gypsum board + PIR foam

DIP is used for wall partition. It is a massive structure wall that gives great acoustic insulation and fire resistance, designed for fast erection, manufactured under stringent conditions, and delivered to specific needs.

## GYPSUM BOARD

### Features

- Thickness: 12,5mm, 15mm, 17,5mm
- Fire resistance rating REI 30/30/30
- All types of gypsum board can be used

**PIR FOAM**, produced by us from materials developed and provided by BAYER.

### Features

- Thickness: 50mm, 60mm, 90mm, 120mm

PIR foam has the best acoustic insulation.

DIP Panels can be used to divide spaces within the building (self bearing walls, non-load bearing walls)

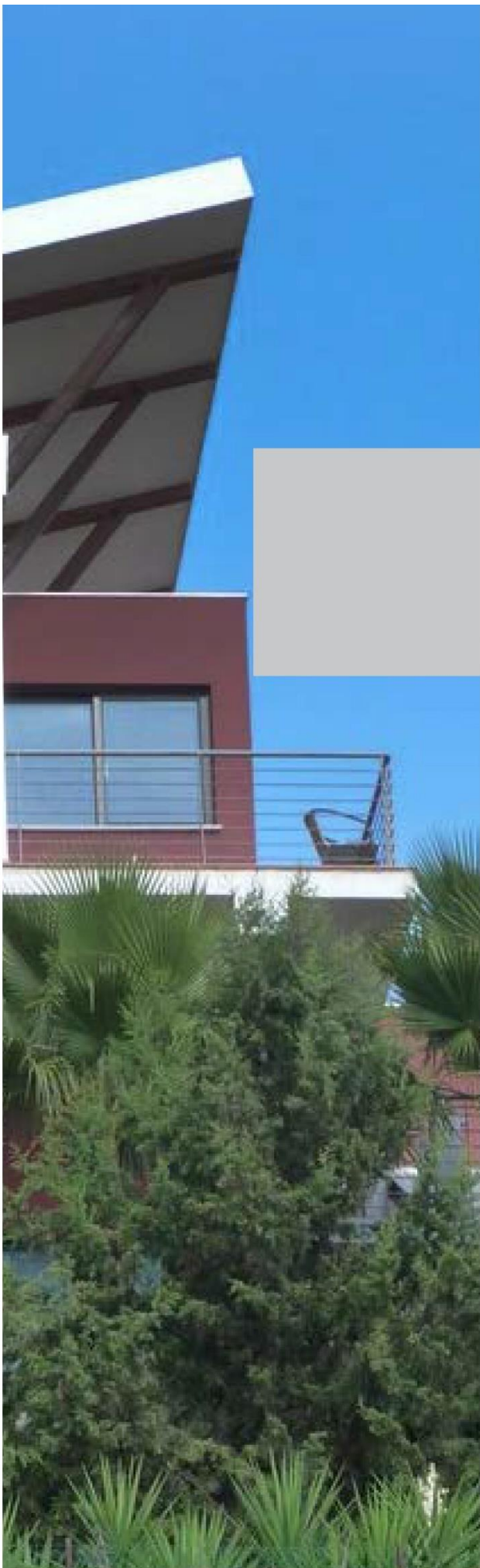
## DIP USES

Panels are perfect either for existing or new structures:

- Private homes or apartments
- Office spaces
- Hospitals
- Schools
- Warehouse spaces
- Entertainment facilities (clubs etc.)







## EXPERIENCE THE INNOVATIVE SIP ARCHITECTURE

Our aim is to launch an innovative, environmentally responsible and resource efficient building system into the market , from design and construction to operation and maintenance.



[WWW.GREEN-PANEL.EU](http://WWW.GREEN-PANEL.EU)

