



SIP – Integrated Building System



INTEGRATED BUILDING SYSTEM

WHAT ARE SIPs

SIP is an acronym for Structural Insulated Panels



SIP – Integrated Building System:

-Provided by Green Panel in ROMANIA

-A complete build up solution delivered on site for erection, internationally recommended

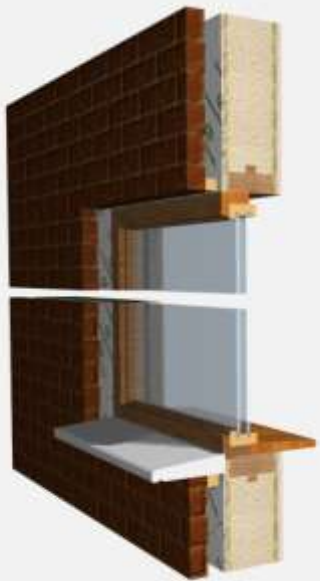
-Consists of SIP panels for wall and roof specially jointed with web beams and I-joists

SIP Panels

-Produced by Green Panel in ROMANIA

-Made up of a rigid PIR Foam core (raw materials from Bayer) sandwiched between two sheets of 15 mm OSB (import Germany) bonded together

-Can be used both as structural components of a building or simply as cladding solutions to any existing structure offering exceptional thermal qualities.



SIP BUILDING METHOD



This method was developed by the architect Frank Lloyd Wright in collaboration with Dow Chemicals back in the 1930's but only came to practice in the 1970's and was under patent until recently. As a result it was introduced in Europe only ten years ago.

SIP International

SIP System is used in the USA, Canada, Japan, Australia, UK, Scandinavian countries, Germany, France, Austria, Cyprus, Greece, Spain, Portugal etc.

SIP – 21st CENTURY'S BUILDING TECHNOLOGY

SIPs can be used for:

- Residential buildings
- Commercial buildings
- Industrial buildings
- Specialised buildings: Hotels, Schools, Hospitals, Churches, etc.
- Extension of the existing buildings – horizontally and vertically

SIPs are suitable for ANY type of geographical area:

- Mountainous
- Hilly
- Plain



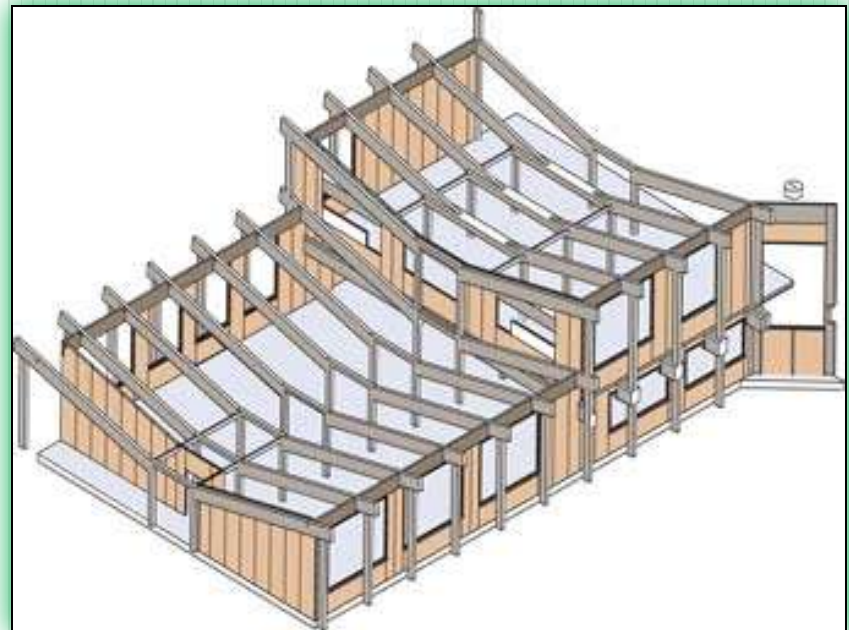
Residential Buildings

SIP provides the best possible construction techniques for a new home. By offering a super insulated structure, with very low fuel bills, modifiable room space and a quick and predictable build program, SIP meets the stringent standards and is officially recognised by a range of 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



Specialised Buildings – Public Sector

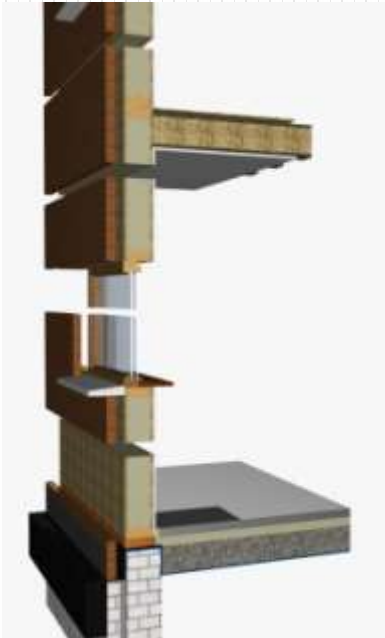
By demanding low U-values and low long term running costs, the Public Sector seeks to ensure that the buildings they commission offer not only the best value for money, but also deliver industry best practice in respect of environmental and socio-economic responsibility.



Schools, Hospitals, Governmental Buildings etc.

SIPs STANDARD DIMENSIONS

- ✓ Width: 122 mm (min) - 1250 mm (max)
- ✓ Length: 2800 mm (max) - for walls
- ✓ Thickness: 120 mm, 150 mm, 180 mm, 210 mm, 240 mm



THE PANELS

✓ PIR Foam

- ✓ Produced in our factory exclusively using Bayer materials
- ✓ The best thermal conductivity coefficient ($\lambda=0,21$ w/m k)
- ✓ Thickness: 90 mm, 120 mm, 150 mm, 180 mm, 210 mm
- ✓ Density: 46 kg/m^3

✓ OSB Boards

- ✓ Made in Germany, of the highest quality
- ✓ Made using biodegradable products
- ✓ ECO and environmentally friendly
- ✓ Thickness: 15 mm (for walls)





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METHOD BENEFITS

Earthquake resistant

Even though you may build in an area where earthquakes are not an issue, the buildings themselves are inherently stronger than other construction solutions. This means your family and your children will be safer in a Green Panel earthquake resistant home.



Fire resistant

Due to the characteristics of the panels – non flammable and incombustible, a SIP building protects your house and yourself against fire.



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METHOD BENEFITS

Durability

As long as the design follows best practice and the building is maintained and weather tight, SIP constructions are certified for 50 years.

Green Panel guarantees a life of 60 years.

Energy efficient – near to zero energy home

Lower monthly energy bills

Due to its thermal insulation properties, temperature variation of 1 Celsius degree occurs in 5 hours.



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METHOD BENEFITS

Cost efficient

SIP benefits can be shown not only in terms of energy efficiency, but also if you consider the following:

- Basic construction cost 30% less than conventional concrete buildings
- Exact construction planned costs – there are no hidden or unexpected costs due to the precise quantity of materials needed, zero material waste (on site cutting and fabrication is eliminated)
- Low cost modifications – you can easily transform a 3 bedroom unit into a 5 bedroom; design flexibility is a benefit for the industrial and commercial buildings as well; extra floors or attic, replacement roofs can be added to existing properties
- Fast rate of construction – the SIP wall is load-bearing and pre-insulated, meaning the waterproof, structural shell is completed much quicker than traditional methods of construction.
- Lower running and maintenance costs



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METHOD BENEFITS

Durability - Protection

SIPs are fully designed and fabricated in a controlled factory environment, ensuring accurate dimensioning and tolerances.

Therefore the end product that arrives on site is accurate and defect free.

ECO compliant home

SIPs are environmentally friendly – ODP zero insulation core and OSB from biodegradable materials.

ABOUT GREEN PANEL



Green Panel – a new and innovative company, part of Phoenix Real Estates Group of Companies, aims to provide you with an harmonious environment for living, namely: safety, durability, comfort, utility and long-term savings, in an ecological environment.

Phoenix Real Estates has operated in Romania since 2001. The company has already developed in Romania a total area of over 60,000 square meters of warehouse and logistics services.

The existing production facility can deliver a daily capacity of approximately 1200 m² of panels with various materials bonded on the rigid PIR core such as sheets of OSB, Gypsum board, Cement board, Magnesia board.

Our technology provides strength, stiffness, high thermal and phonic insulation and in a weather tight environment lasts for life.

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