INNOVA ECO BUILDING SYSTEM

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Innova Eco Building System was founded by a team of experienced SIPs builders that were one of the first to introduce SIPs construction products to South America. Recognizing the limitations of standard OSB (SIP) and Cement Fiber (CSIP) panels used here in the USA and other parts of the world, Innova and its team of Engineers developed new product options to the industry standard SIP panel in order to overcome these limitations.

Our Innova panels have superior fire ratings to standard SIP panels. The loading of the Innova SIP panel is superior to CSIP and OSB SIP panels allowing the application of SIP panels to the building process for a wider range of projects.

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About SIP's

Although foam-core panels gained attention in the 1970s, the idea of using stress skinned panels for construction began in the 1930s. Research and testing of the technology was done primarily by Forest Products Laboratory (FPL) in Madison, Wisconsin as part of an U.S. Forest Service attempt to conserve forest resources. In 1937, a small stressed-skin house was constructed and garnered enough attention to bring in First Lady Eleanor Roosevelt to dedicate the house. In a testament to the durability of such panel structures, it has endured the severe Wisconsin climate and was used by University of Wisconsin–Madison as a day care center up until 1998 when it was removed to make way for a new Pharmacy School building.

With the success of the stress skinned panels, it was suggested stronger skins could support all of the structural loads and eliminate the conventional building frame altogether. After the creation of their prototype, Forest Products Laboratory entered their custom designed SIP into the marketplace where it sold for next thirty years.

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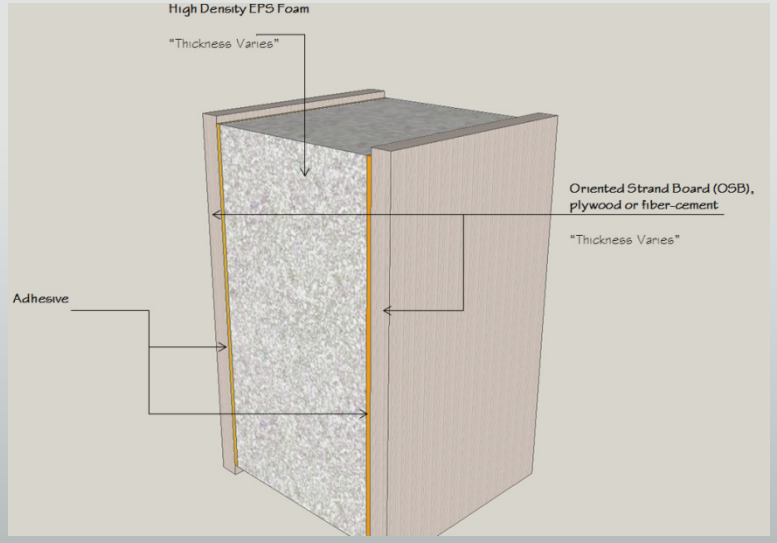
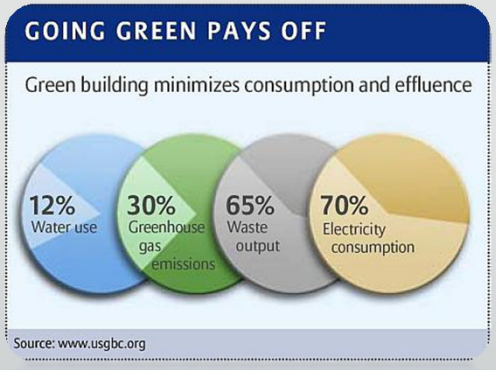
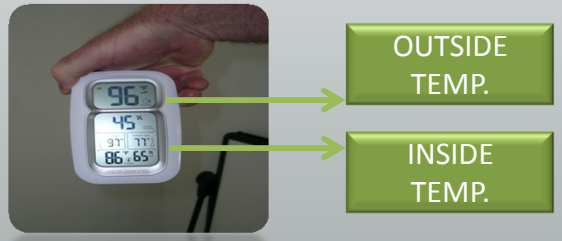
Structural Insulated Panels (SIPs) have become a widely used alternative construction material for homes and other buildings. While many types of Composite Panel building systems have been developed (see separate PATH Technology Inventory article), the acronym SIPs now usually refers to panels made from a thick layer of foam (polystyrene or polyurethane) sandwiched between two layers of Oriented Strand Board (OSB), plywood or fiber-cement. As an alternative to the foam core, SIPs are available with a core of agriculture fibers (such as wheat straw) that provides similar thermal and structural performance. The result is an engineered panel that provides structural framing, insulation, and exterior sheathing in a solid, one-piece component. Some panel manufacturers use continuous lamination machines which automate forming and cutting according to dimensions downloaded from digital floor plans. Arriving precut to the jobsite, the panels can be rapidly assembled by workers without extensive training. SIPs construction allows builders to quickly construct an exterior building envelope that is strong, airtight, and energy efficient.



The basic design concept for SIPs is elegant in its simplicity, and offers several advantages for constructing walls and roofs. Bonding the foam core to the stiff outer skins creates a web-and-flange structural strength (along the same principal as an I-beam) across the length and breadth of the panel. With the capacity to handle axial, bending, racking, and shear loads, properly designed and assembled SIPs not only replace conventional framing, but will withstand high wind, and seismic forces.





Insulation capacity is another advantage of SIPs. There is general agreement that SIPs provide better overall air tightness and practical thermal performance than conventionally framed walls. Panel systems offer a dense, uniform and continuous air barrier with few thermal bridges, and no opportunity for internal convection. Thicknesses of up to twelve inches are available for roof panels where greater R-value is needed. The core material of thicker panels usually corresponds to standard lumber dimensions, so that board stock may be used for splines and plates. Panel lengths can vary to accommodate higher ceilings or roof spans up to 24 ft.

Many manufacturers maintain a standard panel width of 4 ft. for ease of transportation and handling, but wider panels are sometimes designed to accommodate door and window openings. Alternatively, rough openings for doors may be created by placing header sections between full-length wall panels.

Window opening can be made in a similar fashion with the addition of a base panel. Dimensional lumber usually frames out rough openings. For wider openings, headers with greater load bearing capacity may be needed. Insulated Headers (separate PATH Technology Inventory article) using sandwiched foam, have been specially designed to work in conjunction with SIPs. Manufacturers can also produce curved walls or other customized architectural features.

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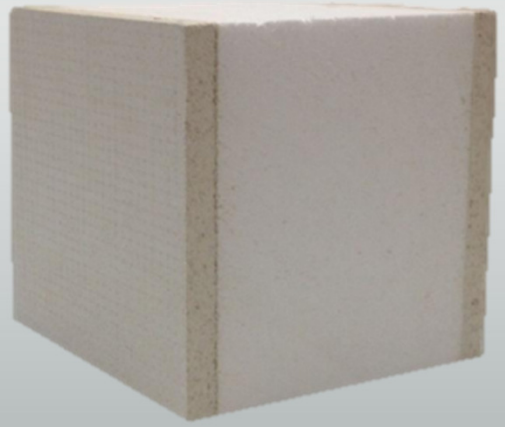
Our Products

- Magnesium Oxide Skin

Magnesium Oxide Skin Structural Insulated Panels (MGOSIPs)



Innova Magnesium Oxide SIPS panels (MGO) are the next generation of SIPs having a superior fire rating to traditional fiber cement and OSB SIPs panels. MGO panel skins are available in thickness of 6 mm to 30 mm. Innova MGOSIPS panels can be used for basement walls and waterproofed with the same methods and materials used to waterproof a concrete basement wall. Innova MGOSIPS are a healthy choice as they contain no organic solvents, heavy metals, asbestos, oils or other toxic ingredients and are classified as a “Green Building Material.”

MGO will not support black mold growth and has a high resistance to moisture absorption making it an ideal choice for wet humid environments. MGO is strong, durable and impact resistant, a requirement for hurricane prone areas. With the use of a MGOSIPS panel, drywall can be eliminated which further reduces the time and cost of construction.

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The exterior surface of MGOSIPS can be painted or coated with a synthetic stucco finish, lap siding, brick veneer, stone and a host of other suitable exterior finishes. MGOSIPS have superior loading, fire ratings and acoustic values over OSB and fiber cement SIPS. NOT ALL MGO BOARD PRODUCTS ARE THE SAME, Innova uses only the finest MGO materials available. As the result of a license distribution agreement, Innova is the exclusive distributor in the USA and South America for MGO Corp magnesium oxide board products. The MGO Corp products are fully approved internal and external sheathing products manufactured under JAS/ANZ CODEMARK Conformity Certification. These certifications are recognized throughout 20 counties worldwide.

There are many Magnesium Oxide Board manufacturers however MGO Corp is currently the only Magnesium Oxide Board available in the USA and South America with these certifications in place for its products. The Innova Panel is manufactured using the JAS/ANZ CODEMARK approved MGO board for its external skins.

Innova MGOSIPS panels are manufactured in our climate controlled factory with state of the art equipment to produce one of the highest quality MGOSIPs available in the market. Innova Panels are extremely strong, durable, energy efficient and cost effective.

- Cement Fiber Skin

Innova manufactures energy efficient Cement Fiber Skin SIPs panels (CSIPS). Our CSIPS panels are manufactured with an expanded polystyrene insulating foam core of 1 to 3 pound density that is sandwiched between two 5/16" thick cement fiber skins. Buildings constructed with CSIPs are more durable and will require less maintenance than buildings with OSB SIPs panels. Fiber-Cement Board SIPs will not rot or corrode and have a higher fire rating than OSB SIPs. Cement Fiber boards will not support black mold growth and have a high resistance to moisture absorption. CSIP panels emit no know toxins and are classified as a "Green Building Material." With the use of a CSIPS panel, drywall can be eliminated which further reduces the time and cost of construction. The exterior surface of CSIPS can be painted or coated with a synthetic stucco finish, lap siding and a host of other suitable exterior finishes. CSIPS used to construct load-bearing walls up to four stories, roof panels up to 20 foot spans, floors spanning up to 16 feet between supports. Innova CSIPs are manufactured in our climate controlled factory with state of the art equipment to produce one of the highest quality CSIPs available on the market. Innova Panels are extremely strong, durable, energy efficient and cost effective

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- OSB Skin

Innova manufactures OSB SIPs with skins of 7/16” and 19/32” oriented strand board (OSB). These panels consist of expanded polystyrene insulating foam core of 1 to 3 pound density that is sandwiched between two structural OSB skins. Innova SIPs are manufactured in our climate controlled factory with state of the art equipment to produce one of the highest quality SIPs available on the market. Innova Panels are extremely strong, energy efficient and cost effective. Our OSB SIPs panels are available in sizes of 4’ wide by 24’ in length. Innova sells panels in standard sizes or we will fabricate the panels to your specifications and design. Our OSB SIPs panels are available in thicknesses up to 12”.

SIP Panels, as tested by the U.S. Department of Energy, have been proven to outperform conventional frame construction by at least 66% for energy efficiency. SIP Panels have been found to be 2-1/2 times stronger than conventional framing. Additionally, SIPs reduce the time required for framing a building structure by over 50% and offer superior noise and weather isolation over traditional framing systems

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Export

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We export our panels and building kits around the globe. We have one of the most modern, automated sips manufacturing facilities in the world. We know what it takes to create structures that can withstand the elements including hurricanes and earthquakes. Our structures are designed to perform under pressure, without sacrificing energy efficiency, comfort or ease of construction.

At Innova you will not spend your first day or more of labor on the project sorting and organizing panels for installation. We organize and flat pack panels by wall elevations. Flat Packs are unloaded using a forklift and set on your slab per building elevation. When the packs are opened, the panels in the packs are even organized in the order that they are installed. No more moving stacks of panels around to find the panel you need, loosing valuable crew time on the jobsite. Spend your crew hours installing kits, not searching for the next panel to install.

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Important Events

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March 2012

Innova opens a 60,000 square foot state of the art automated SIPs manufacturing plant in Miami, Florida that is capable of manufacturing 3000 energy efficient Innova building kits a year.

April 2012

Innova introduces new product lines:

a) Innova MGO SIPs Panels: (Magnesium Oxide SIPs panels). Innova panels are the next generation of SIPs panels having a superior fire rating to traditional fiber cement and OSB SIPs panels. As the result of a license distribution agreement, Innova is the exclusive distributor in the USA and South America for MGO Corp magnesium oxide board products. The MGO Corp products are fully approved internal and external sheathing products manufactured under JAS/ANZ CODEMARK Conformity Certification. These certifications are recognized throughout 20 counties worldwide. There are many Magnesium Oxide Board manufacturers however MGO. Corp is currently the only Magnesium Oxide Board available in the USA and South America with these certifications in place for its products. The Innova Panel is manufactured using the JAS/ANZ CODEMARK approved MGO board for its external skins.

b) CSIPs: (Cement Panel SIPs) Innova offers a Cement skin SIPs (CSIPs) panel as part of its product line. Innova offers cement panel skins in the standard 5/16" cement fiber board skins and additional thicknesses up of cement board up to 1" depending on the intended end use of the panels.

May 2012

a) Innova signs a contract to manufacture 300 of its energy efficient single family building kits for South America.

b) Innova starts Engineering Design Development on a 4 story multifamily MGO SIPs Panel structure. Innova hopes to complete the design for product testing in early 2013.

c) Innova commissions a team of engineers to test and gain necessary approvals for a commercial SIPs building panel to be used as an exterior skin for multistory high rise commercial and residential buildings. Innova hopes to complete testing and certification to allow the introduction of this innovative new product in early 2013.

December 2012

Innova signs a contract to manufacture 325 of its energy efficient duplex building kits for South America.

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Live Clean, Build Green