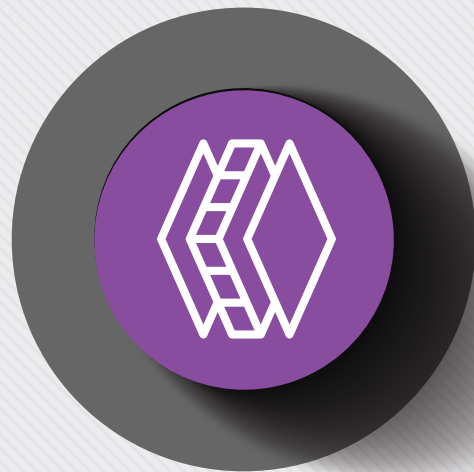


What is a SIP?

SIP panels have been called “the building material for the 21st Century.”

Structural insulated panels, or SIPs, are a high-performance building system for residential and low-rise commercial construction. The panels consist of an insulating foam core sandwiched between two structural facings, typically oriented strand board (OSB).



SIPs are manufactured under factory-controlled conditions and can be made to fit nearly any design of building. It brings together the efficiency of standardisation with modern methods of construction and the flexibility of bespoke solutions and build programmes. They are particularly useful for residential, education office, commercial and low-rise projects.

The result is a building system that is extremely strong, energy efficient and cost effective. Building with SIPs will save you time, money and labour.

Building with SIPs generally costs about the same as building with wood frame construction when you factor in the work savings resulting from shorter construction time. However other savings are realized because smaller heating and cooling systems are required with SIP construction. Also, there is less waste produced so building sites are safer and greener.

SIP-constructed homes go up considerably faster than traditionally framed buildings. A recent study showed that a properly trained installation crew can cut framing time by 55 percent compared to conventional wood framing.



Panels can be built in a variety of sizes, so entire wall and roof sections can be put up quickly. SIPs are ready to install when they arrive at the site, eliminating the time needed to perform the individual operations of framing, insulating and sheathing stick-framed walls. Electrical chases are typically provided in the core of panels, so there is no need to drill for wiring.

Structural insulated panels are one of the most environmentally responsible building systems available.

A SIP building envelope provides continuous insulation, is extremely airtight, allows for better control over indoor air quality, reduces construction waste, and helps save natural resources. Life cycle analysis has shown that SIP homes have a tremendously positive environmental impact by reducing energy use and greenhouse gas emissions throughout the home's life cycle.

SIPs are just as strong as steel beams. The structural characteristics of SIPs are similar to that of a steel I-beam. The oriented strand board skins act as the flange of the I-beam, while the rigid foam core provides the web.

SIP buildings are extremely airtight, and so will require mechanical ventilation. By limiting the air exchange to controlled ventilation systems, SIP buildings allow for all incoming air to be filtered for allergens and dehumidified, creating better indoor air quality, for a healthier working and living environment.

Like all wood frame buildings, SIPs present a manageable fire risk when their construction meets the fire precautions listed in the building code. Our i-FAST panels deliver superior fire-risk capabilities that meet the highest performance standards.

SIPs are compatible with almost any building system. Wall panels can sit on almost all foundation materials, including poured concrete, blocks, or insulated concrete forms. Builders may choose to build with SIP walls and a conventional truss roof or stick walls and a SIP roof with little difficulty. SIPs are also popular as a method of providing a well-insulated building enclosure for timber frame structures.



SIPs also have the ability to create hybrid solutions, as they can include concrete, timber and steel, both during construction and in the future. Our i-SIP system ensures that there is the capability to mix and match solutions and involve new innovations in terms of cladding and ducting to take advantage of technological advances in the future. This adds significantly greater flexibility to the options and finishes for projects.

