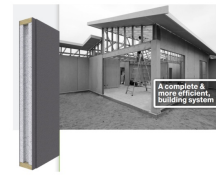


sipform Modular Building System



sipform Modular Building System Instructions

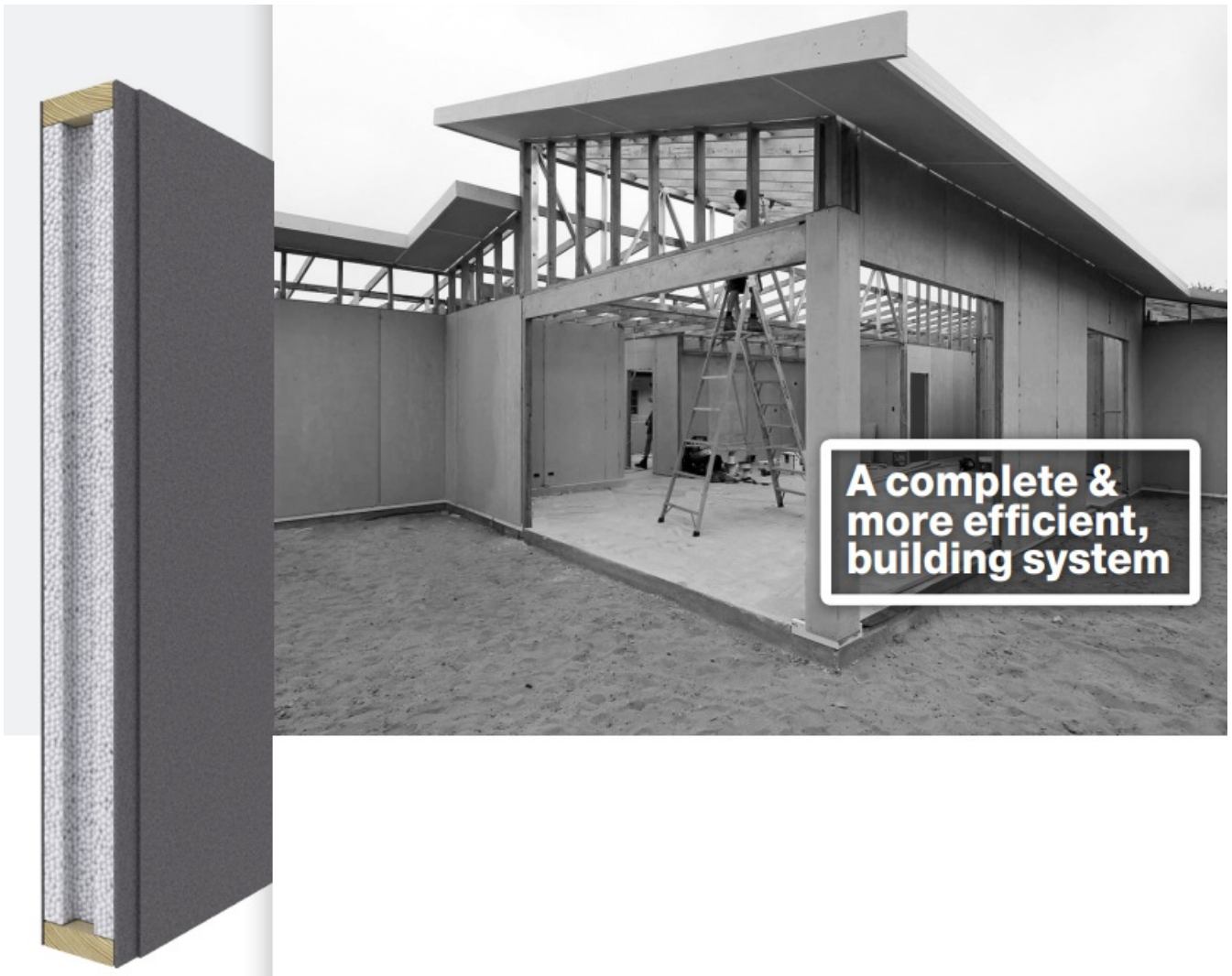
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sipform Modular Building System



Product Information

Specifications:

- System Name: SipFormTM
- Country Availability: Australia, New Zealand
- Contact Information:
 - Australia: P : 1800 747 700, E : info@sipform.com.au, W : sipform.com.au
 - New Zealand: P : 0800 747 376, E : info@sipform.co.nz, W : sipform.co.nz
- Features:
 - Fully insulated factory fabricated system
 - Delivers high performance homes
 - Provides energy efficiency, building efficiency, material efficiency
 - Storm resistant, fire resistant, termite resistant

Product Usage Instructions:

For Licensed Builders:

If you are a licensed builder, you can become a recognized installer or builder with our product. The system is designed to help you deliver more homes faster without being hindered by bad weather conditions. The 3D modeling allows for accurate cost estimation.

For Owner Builders:

Owner builders can benefit from our system by receiving supply and build services to lock-up quickly. This allows for a shorter lead time and easier financing. By letting us complete the home to lock-up stage, your structure is covered by our warranty.

Building with Structural Insulated Panels (SIPS):

SIPS are factory-fabricated panels that combine structure, cladding, lining, and insulation into one panel for easy on-site installation. They offer energy efficiency, speed of assembly, reduced waste, storm resistance, fire resistance, and pest resistance.

Understanding Transfer of Temperature, Noise & Disturbance:

- **Transfer of Temperature:** The Super Graphite insulation used in our system reduces temperature transfer by an additional 30%, providing greater internal comfort and energy savings.
- **Noise & Disturbance:** SipForm panels help reduce noise from external sources like railways or roads, enhancing the living environment.

Frequently Asked Questions (FAQ):

- **Q: What are the benefits of using the SipForm™ System?**

A: The SipForm™ System offers energy efficiency, building efficiency, material efficiency, storm resistance, fire resistance, and termite resistance. It provides a fully insulated envelope for greater comfort and reduces reliance on heating/cooling.

- **Q: How does the SipForm™ System contribute to environmental sustainability?**

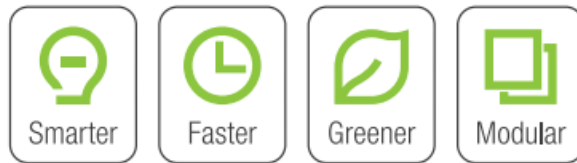
A: The system uses standardized material sizes to reduce waste and impact on the environment. It is designed to resist severe weather conditions and is made from pest-resistant materials to ensure longevity.

SipForm™ System Benefits

- A more comfortable, liveable home
- Architecturally inspired product
- Excellent sound absorbing properties
- Healthy, non-allergenic environment
- Precision engineered & fully installed
- 50+year lifespan, pest & mould resistant
- Strong – earthquake & cyclone-resistant

SipForm™ System Savings

- 50% faster than normal construction
- Less demand for trades & labour
- Reduce transport & site deliveries
- Minimises excavation & disturbance
- Less delays from poor weather
- 30% less waste generation & disposal
- Save up to 60% on energy costs



Australia

P : 1800 747 700

E : info@sipform.com.au

W : sipform.com.au

New Zealand

- P : 0800 747 376
- E : info@sipform.co.nz
- W : sipform.co.nz

A fully insulated factory fabricated system delivering high performance homes that don't cost the earth!

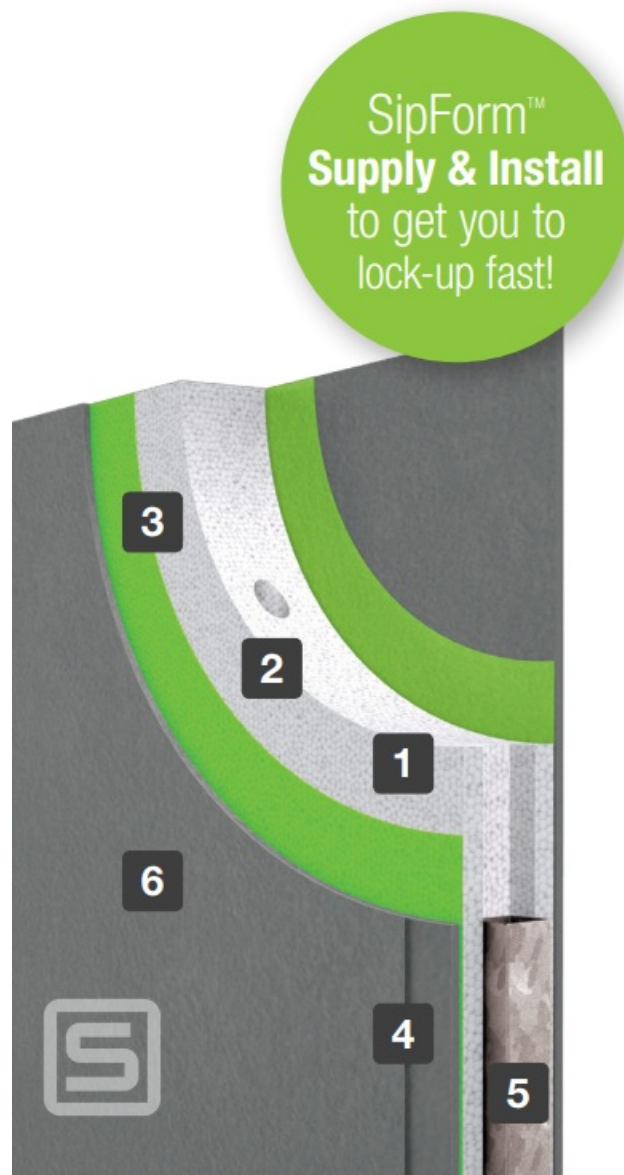
For the Licensed Builder

- You can become a recognised installer, or a builder with a new product suited to the emerging market.
- You can deliver more homes, faster and not get held back by bad weather.
- As the design is modeled in 3D, we can provide you a full breakdown of areas and quantities to help your costing.

For the Owner Builder

We can supply and build to lock-up so you get your home sooner. With a full structural warranty and short lead times, finance is often easier for the owner builder to obtain.

By allowing us to complete the home to lock-up, your structure is covered by our warranty (conditions apply).



Let's take a Close Look

1. Fully Insulated Airpop® Core
2. Pre-profiled Service Conduits
3. High Strength Bonding
4. Edge Rebate for Flush Joints
5. Jointed for Cyclone Proofing
6. Numerous Cladding options

A guide to building with Structural Insulated Panels: SIPS



What are SIPS?

SIPS are a lightweight composite panel. The external cladding and internal linings are bonded to an insulated airpop® core creating a thermally efficient panel, that when installed provides for a more robust, energy efficient envelope to the home.

SIPS are pressed and tooled to size within a factory environment to permit quick and accurate on-site installation. Our system combines all traditional building elements: structure, cladding, lining and insulation into one easily

installed and finished panel.



Why is change needed?

Home owners are moving toward more affordable, efficient and environmentally responsible living. The old ideology of brick and tile is being traded for a truly architectural aesthetic that out performs traditional building methods and yet doesn't cost the earth!

When you consider these growing demands and the ultimate performance of this SipForm™ system, the benefits become obvious and rather remarkable.

	Energy Efficiency	Creating a fully insulated envelope with minimised thermal bridging, meaning greater internal comfort and less reliance on heating & cooling.
	Building Efficiency	Engineered off site provides faster, more accurate on-site assembly, reduced site disturbance, less trades, less transport and less waste.
	Material Efficiency	As waste generated from building is currently a major contributor to landfill, we use standardised material sizes to reduce the waste and impact.
	Storm Resistant	SipForm's system is engineered to resist severe storms, earthquakes, cyclones and provide for easier recovery of the home after flooding.
	Fire Resistant	SipForm uses fire resistant external materials help safeguard the home against bushfire, this is reassuring given the increasing bushfire threat.
	Termite Resistant	Pest resistant materials ensure you won't suffer the costly consequences, whilst rotting, mould and weathering are almost be eliminated.

Understanding transfer of temperature, noise & disturbance



Transfer of temperature

Airpop®, the core of our panels is a low density insulation. It works to reduce both temperature and noise transfer. Airpop® helps to maintain the temperature within the home and you effectively use far less energy to control your internal comfort.

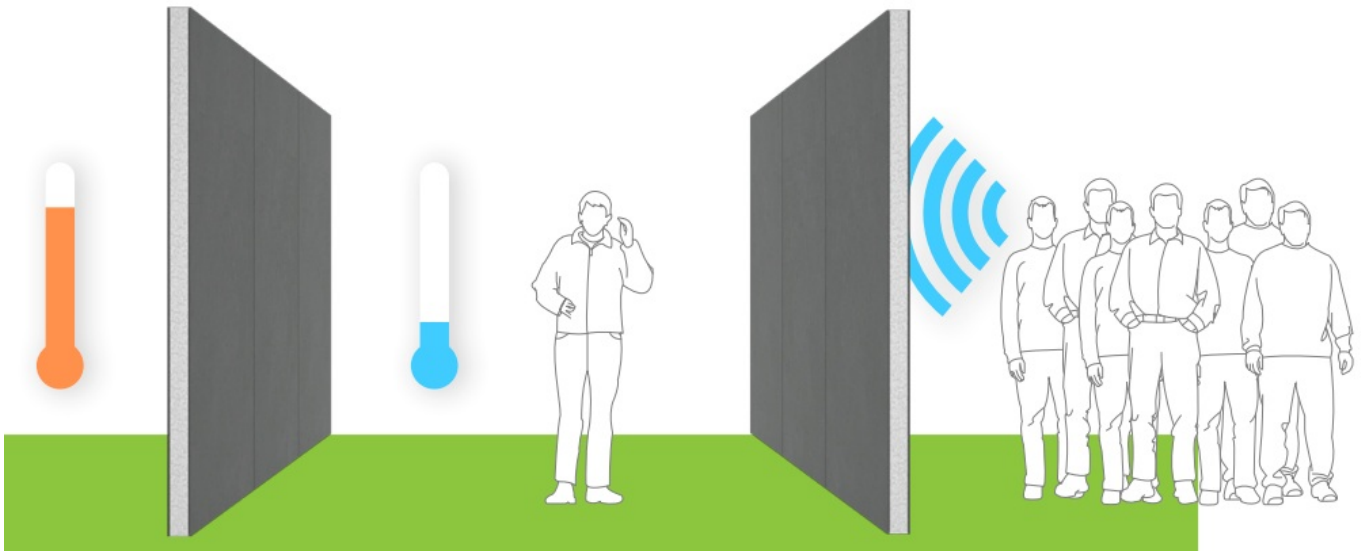
Our Super Graphite insulation can achieve even better performance. Here a thin Graphite film around each bead reduces temperature transfer by an additional 30%.



Noise & disturbance

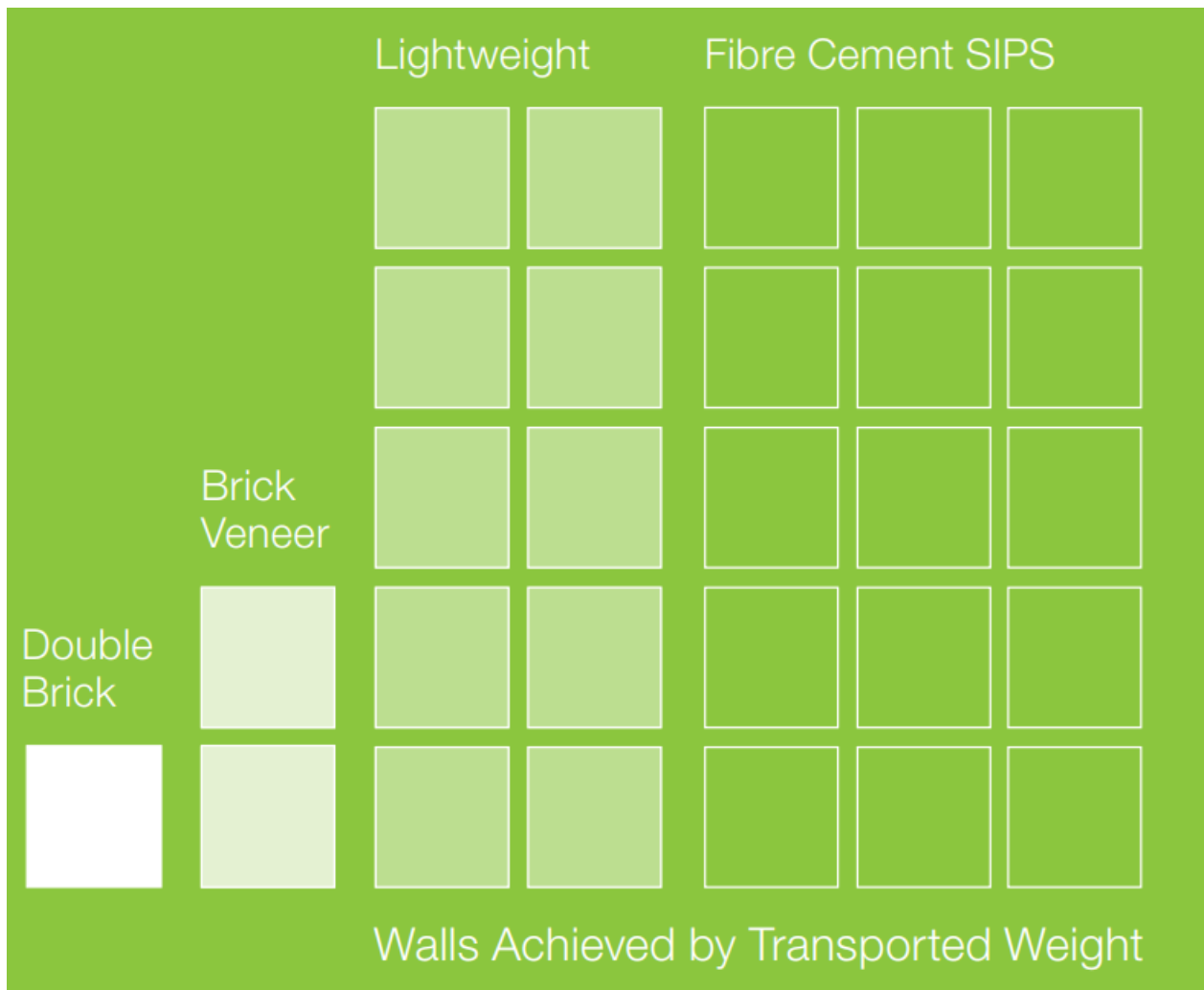
Airpop® works magic on the performance of the home by keeping it quiet and private! You are always guaranteed a better night's sleep through the lowering of noise from adjoining rooms. So, there's no need to tip toe around when someone's sleeping.

If you're next to a railway, main road or higher traffic areas such as a carpark, noise generated from these sources can be significantly reduced.



The impact of transport

Transport impacts and costs are another reason to consider lightweight alternatives. Double brick, brick veneer and even traditional lightweight struggle to compare with the weight savings offered by SIPS. This is significant if building in remote locations, as 1-2 trucks can deliver a home.



Mix & Match material options

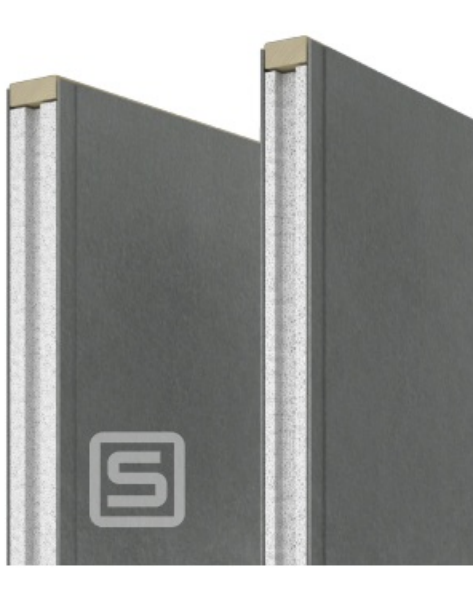
Weathertex

- An Australian made and extremely durable reconstituted wood cladding with incredible environmental credentials.
- Perfect for a high end architectural feel externally. Weathertex can be used as alternately to break up facades or create internal feature walls internally.
- Weathertex is available in a huge range of smooth, grooved or textured finishes, all boards come pre-primed and ready for painting. It is also available in a natural finish that can be stained and oiled to retain its deep colour or left untreated to age and grey off to a cedar style patina.
- **For more visit:** www.weathertex.com.au



Fibre Cement

- A product already well known in the housing industry. Suited a range of uses both externally and internally including wet areas and ceilings.
- Fibre Cement is resistant to fire, pests including termites, mould and rot.
- Panels are all factory edge rebated for taping and flushing joints similar to the finishing of installed plasterboard.
- Externally an acrylic texture coat can be applied for a rendered look or panels supplied without rebates for batten jointing.



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Save with technology!

Though not new technology, SipForm™

is the first manufacturer to make a major investment in the development of SIPS with a range of finish and insulation options.

A system that provides real cost reductions, less site disturbance, a reduction in trades, waste, transport, supply chain reliance, overall demand on energy and most significantly, time!

Dual-core thicknesses

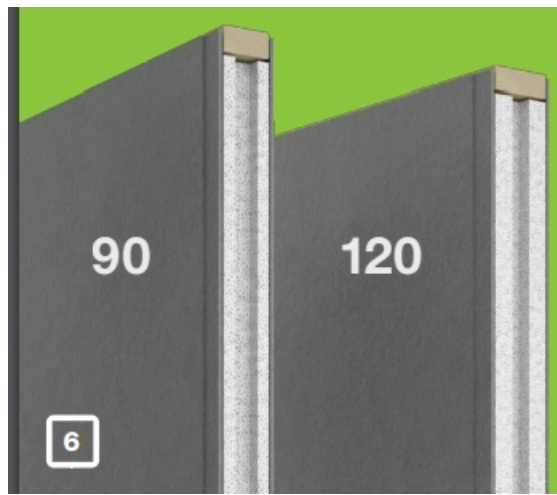
90mm Core

Generally used for internal walls or externally where using an alternative over cladding. These panels only use our Super Insulate insulation to achieve better internal privacy.

120mm Core

Generally used for exterior walls.

Performs better on thermal performance while providing a more aesthetically substantial envelope.



A choice of insulation options to meet comfort demands

A high density airpop® core providing high levels of internal comfort and outstanding insulation values, typical to all our wall and floor panels.

For little additional cost you can upgrade to Super Graphite in exterior walls for a significant performance boost!

External Cladding	Fibre Cement		Weathertex*
Core Panel Thickness	90 105mm	120 135mm	120 139mm
Weight per m2	20.9 kg	21.3 kg	21.4 kg
Insulation R Values	2.43	3.15	3.17
Standard Panel Width	1 200mm		1 200mm

Fibre Cement to Internal Face

Standard Panel Heights (mm) Panel Weight Average (kg)

2 400	2 700	3 000	3 600	2 400	2 700	3 000	3 600
60.8	68.4	76.0	91.2	61.6	69.3	77.0	92.4

Graphite is proving to be the wonder material of the millennium. Each bead is coated in a film of graphite to further reduce thermal transfer.

Using Super Graphite in exterior walls costs less than a year's worth of energy yet provides greater comfort and higher energy efficiency.

External Cladding	Fibre Cement		Weathertex*
Core Panel Thickness	90 105mm	120 135mm	120 139mm
Weight per m2	20.9 kg	21.3 kg	21.4 kg
Insulation R Values	3.00	3.72	3.74
Standard Panel Width	1 200mm		1 200mm

Fibre Cement to Internal Face Standard Panel Heights (mm) Panel Weight Average (kg)

2 400	2 700	3 000	3 600	2 400	2 700	3 000	3 600
60.8	68.4	76.0	91.2	61.6	69.3	77.0	92.4

Integration is easy! SIPS with other construction methods

• Conventional Slab on Ground

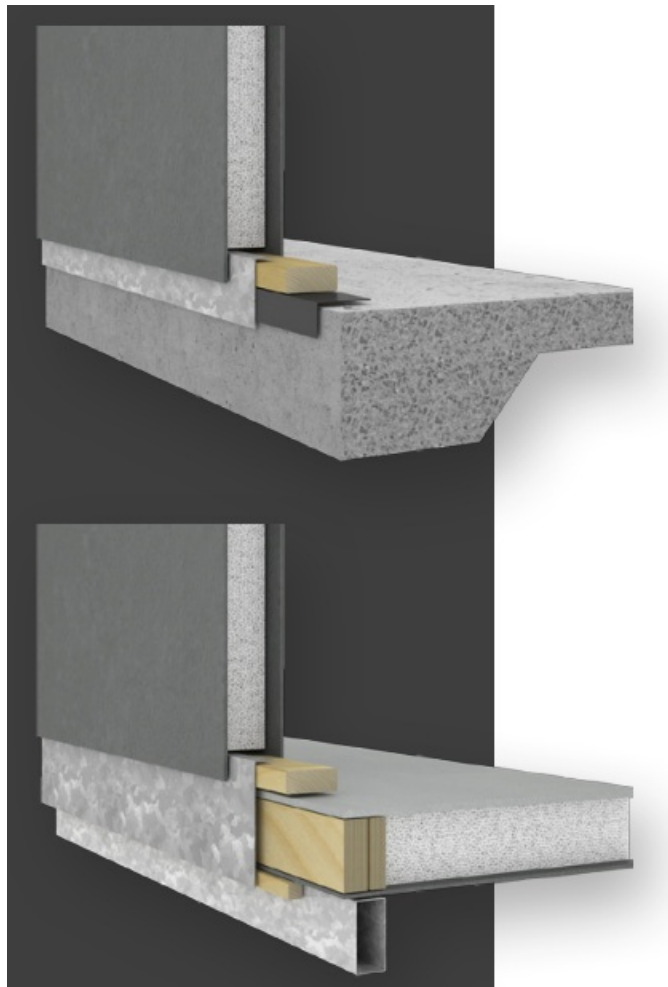
On level sites or within urban areas, where slab on ground may be preferred, SipForm™ wall panels can help speed construction and increase the home's overall performance and comfort.

Using SipForm™ can significantly reduce your build time and costs, both in dollars and impact!

• Elevated Flooring Systems

Our insulated floor panels reduce the floor structure depth as well as stopping thermal losses.

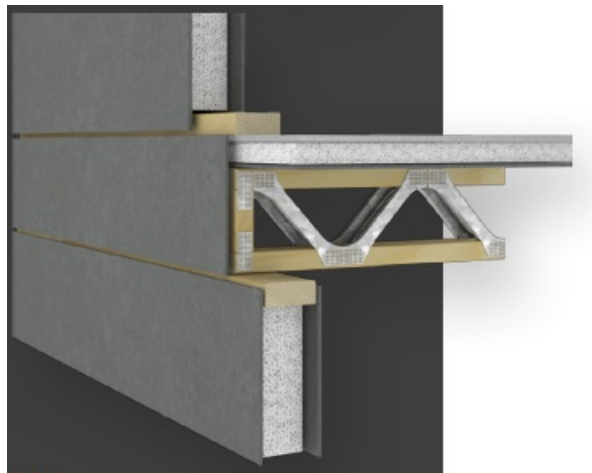
Our system of construction is perfect for sites with moderate slope, those subject to flooding, where the bearing is varied or where landscape features are intended to be left undisturbed.



- **Upper Floor Construction Options**

SipForm™ insulated floor panels make for large clear spans reducing the number of floor joists required.

SipForm™ Quiet Floor panels used over normal floor joists creates a concrete feel flooring while providing better control over climate zones and acoustic privacy.



Our building system can adapt to any other form of construction while still providing time savings.

If engaged to build your home to lock-up, we can take control of organizing, installing and finishing your floor and roofing.

Your roof structure options

If you're considering a clear-spanning panelised proprietary roofing system, we can provide you details of our preferred suppliers.



- **Trussed Roof Structures**

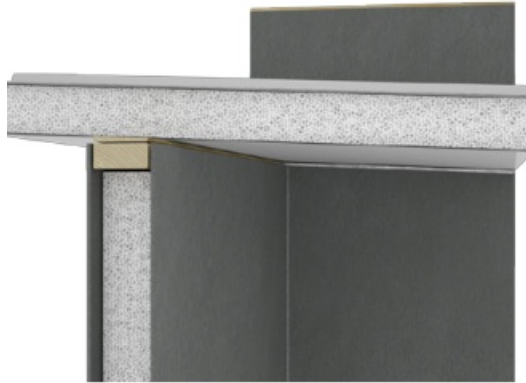
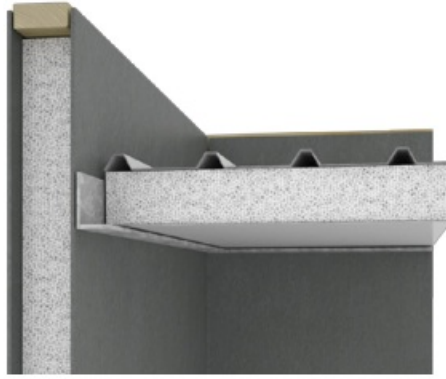
SipForm™ wall panels can support any conventional wide-span roof structure. Steel or timber trusses can be anchored to the top plate in the same fashion as with conventional timber or steel wall framing.

- **Insulated Panel, Contained**

If wanting a contemporary feel to your home and installing a parapet to the perimeter, we highly recommend the use of proprietary insulated panel roofing. These panels are large spanning and can be installed to be fully contained within the parapet.

- **Insulated Panel, Cantilevered**

Insulated panel roofing can be installed to create large spans with deep cantilevered shading cost-effectively. These roofs create larger internal volumes and are becoming common within most climatic conditions, allowing your designer to control sun penetration all year round.



Built on simplicity

We've worked to develop a system that is the best available in the world, one that has simplicity at its core!

Everything from our 3D modeling system, data export, labeling, fabrication, transport and installation, all contribute to a neat holistic package that saves time and hassle in every one of these processes.

Our system is efficient in reducing time in delivery, time on-site, time and costs in the reduction of waste headed to landfill.



There are numerous types of panels on the market, some however are only used to replace part of the conventional framing and to provide for insulation. We look at the most common surfacing materials:

- **Oriented Strand Board (OSB)**

A reconstituted timber board similar to particleboard. Panels fabricated from OSB are strong and easily worked with traditional carpentry tools, these panels are high performing and panel for panel they are competitively priced. However, like particleboard, OSB doesn't like moisture!

- **Magnesium Oxide**

A board that is resilient to pests, mould, fire and storms, though this surfacing has become less popular due the resultant heavy weight of the panel. Panels may require hoisting to assist installation.

- **Fibre Cement**

Used internally and externally by SipFormTM. Its strength allows for ultra-thin skins to reduce panel weight! It is currently used throughout the industry as a cladding and lining to eaves, and as it stands up to moisture, it is ideal for wet area linings. Fibre Cement is resistant to fire, pests incl. termites, water, mould and fungus.

- **Weathertex**

A product currently only used by SipFormTM as a skin option to SIP panels. Weathertex is made from 100% reconstituted timber pulp with no added glues. It is available in a wide range of pre-primed and natural finishes that come pre-primed and ready for immediate painting.

What's makes SipFormTM a significantly better SIP choice?

Let's take a Close Look

We check out the two main types of panels available in our market to determine what is involved in their use and

gauge the implications to any build.

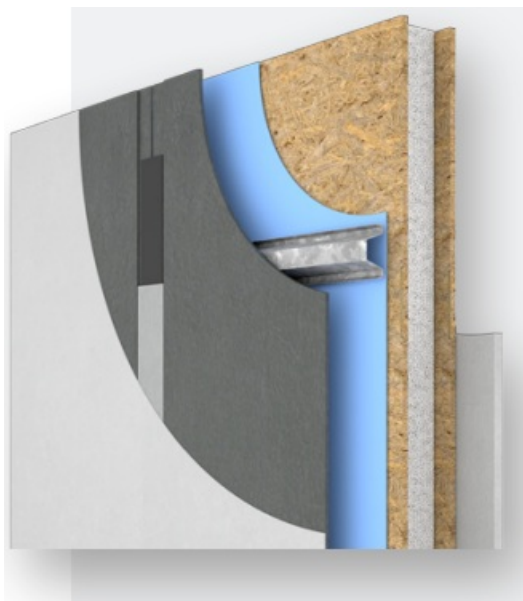


Oriented Strand Board

After panel installation the whole exterior must be wrapped in a weather barrier to repel any water. Steel top hat sections or timber battens are installed and the outer cladding is applied, joints are taped and flush sealed and finish applied. Internally, the panels are lined with plasterboard, joints are taped and flush-sealed and the finish applied.

Important Note:

If moderate to heavy rains are forecast, it is essential the top of each panel is covered with plastic sheeting and that sheeting securely fixed.



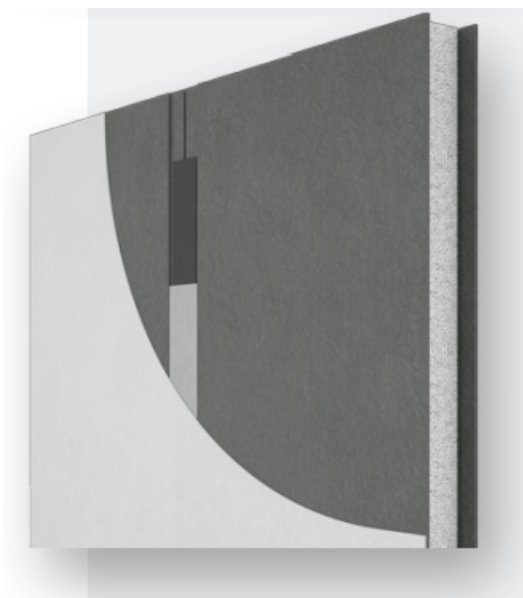
SipForm™ Fibre Cement

External and internal joints are taped and flush sealed and the finish applied. If using Weathertex externally, the paint finish is simply applied.

Important Note:

If moderate to heavy rains are forecast, go home!

Using SipForm™ saves you time during the build, saves you money, plus you have little issue with rain during the build and recovery after flooding.



When using SipForm, the benefits speak for themselves.

The timeline process from order to lock-up of your home!

Traditional Methods Built to lock-up	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SipForm™ Panel System Built to lock-up
Overall planning, design and approvals are carried out	<input type="checkbox"/>	<input type="checkbox"/>	SipForm work with your designer to pin point any possible cost efficiencies
Frames and trusses are ordered Site preparation and bulk excavation	<input type="checkbox"/>	<input type="checkbox"/>	Panel design and manufacturing is done off-site while site works progress
Floor slab or pads for pier and beam flooring are formed and poured	<input type="checkbox"/>	<input type="checkbox"/>	Utilising our partner products, piers can be installed in only one day
If utilised, the elevated flooring structure is installed and insulated	<input type="checkbox"/>	<input type="checkbox"/>	Sub floor structure and insulated SipForm floor panels quickly installed
Structural wall framing and roof trusses are delivered and installed	<input type="checkbox"/>	<input type="checkbox"/>	SipForm insulated wall and proprietary roof panels are installed
External vapour barrier is applied	<input type="checkbox"/>	<input type="checkbox"/>	Windows and doors are installed
Roof sheeting or tiling is installed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Home to lock-up approx. 6 WEEKS
External wall cladding is installed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Bonus: Floor, walls and roof have been insulated with panel installation
Windows and doors are installed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Bonus: Ceilings and all external and internal walls are already fully lined.
Home to lock-up approx. 12 WEEKS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Bonus: Electrical cabling already installed in hand with panel installation



3D Modelling & Approval

We rely on accurate 3D modelling to supply data for factory fabrication of all elements.

- Your designer supplies drawings as CAD files or PDF
- Your design is modelled in 3D & panel data generated
- Model & details supplied to Engineer for Certification
- Static views supplied to the client for signed approval
- We can supply 3D model navigable in your browser



Component Fabrication

With receipt of the Engineer's Certification & your approval, the fabrication process begins.

- All 'close to dimension' materials are ordered & received
- Steelwork, jointers & any flooring system are fabricated
- Panels laminated, pressed & tooled to exact dimensions
- Panels palletised systematically to facilitate installation
- Panels are protected, transported & off loaded on site



On-Site Works & Installation

Prefabrication is often timed perfectly to match the completion of your floor slab.

- Floor slab or elevated floor structure installed
- Pre-installed slab checked for accuracy & remedied
- Wall panels, jointers & structural steelwork installed
- Walls are securely anchored to the floor structure
- Roof system installed, finished & flashed, or
- The build is ready for your own roof system installation



Frequent questions: There are a few given this is a new system

Preliminary Questions

- **Are there any considerations when designing a home using your system?**

Answer:

Our system can adapt to almost all designs, considerations are mostly in response to efficiencies in panel layout.

- **What advice can you give our designer when designing to use your system?**

Answer:

Designers should read our manuals and seek feedback before design is finalised.

- **Can you recommend a designer to prepare a design for us?**

Answer:

We've worked with a number of designers, though designing with our system is not that different to others. We suggest using a designer with an eye for your style, or request a list of designers with a good working knowledge of our system.

- **Are costs of construction using your system relative to a square metre rate?**

Answer:

With so much dependant on the design, we suggest checking in at concept stage for latest cost indicators.

Supply & Installation

- **Do you supply and install your system in my area or state?**

Answer:

Yes, we are quickly recruiting installers in every state. Though we are always looking for competent builders to strengthen our team and fulfill the increased interest in this form of construction.

- **As an owner builder can I install your structural insulated panels myself?**

Answer:

Unfortunately not, installers of our system are accredited. Mindful that installations carried out by those accredited benefit from the same structural warranty normally offered by a custom home builder relative to each state or territory requirements.

- **As a licensed builder can I install the structural insulated panels myself?**

Answer:

Our system demands experienced installers, but we do offer training and installer's accreditation.

- **Is there a lot to learn about finishing my home after the structural insulated panels are installed?**

Answer:

Finishing your home is very much the same as with any conventional form of construction. We supply a facts sheet with recommendations.

Floor Construction

- **Are there any tolerances to consider when installing our floor structure to accept your wall panels? Or can you install my floor suited to your system?**

Answer:

- The precision of our system demands that any slab on ground or elevated structural floor structures must be to tight tolerances.
- We can install any flooring system or provide you with details of contractors who can capably install to those tight tolerances.

Environment Conditions

- **Under what environmental conditions can I still use your panel system?**

Answer:

- Our system is not only quicker to install while creating a high performance home, it is also versatile in meeting most, if not all, environmental challenges:

- **Cyclones:**

Our system incorporates tie down rods as standard, meaning it is resistant to the worst of storms or cyclones. The panels are also resistant to penetration of flying debris.

- **Bushfire:**

We are currently testing to determine the maximum limit for use in high risk areas.

- **Flooding:**

As panels contain little that absorbs water, our panels perform brilliantly in flood zones as recovery after flooding is fast and easy.

General Construction

- **Can I over clad your wall panels with another material?**

Answer:

Absolutely! When doing so you can use our 90mm panel to save some space and costs, or our 120mm panel for performance.

When applying an over cladding material, top hat sections or timber battens are to be installed to create an exterior cavity to the panel, no building wrap is required. This is particularly useful if building in New Zealand where cavity construction may be required.

- **How are plumbing, electrical cabling and fixtures installed when building with structural insulated panels?**

Answer:


- Conduits for electrical cabling are formed in the panel core during the manufacturing to create vertical pathways every 400mm. Cables are easily drawn through without compressing the insulation.
- Plumbing is typically brought up through the floor into walls or directly into cabinetwork. Walls with a high concentration of plumbing are often better built from timber framing.

- **How are cabinetwork and other joinery fixed to structural insulated panels?**

Answer:

- Panels supporting cabinetwork are identified during modelling, reinforcement is laminated within all these panels during their manufacture. For fixing other light weight fixtures to the panels, we provide a range of recommendations that perform well.

Documents / Resources

	sipform Modular Building System [pdf] Instructions Modular Building System, Building System, System
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References

- [Faggildingarsvið Hugverkastofunnar](#)
- [sipform.com](#)
- [User Manual](#)

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