

SIPs

structural insulated panels

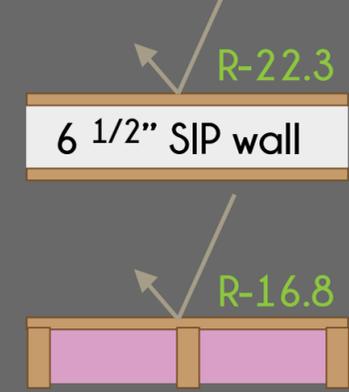
Structural Insulated Panels (SIPs) offer multiple properties, all-in-one, to help build high performance homes.



R-Value

Effective R-Value:

The R-value of a whole-wall or roof system, in a real environment.



Stud Wall w/ R-20 batt

R-Value Measures:

A material's Resistance to thermal energy transfer.

SIP Thicknesses:

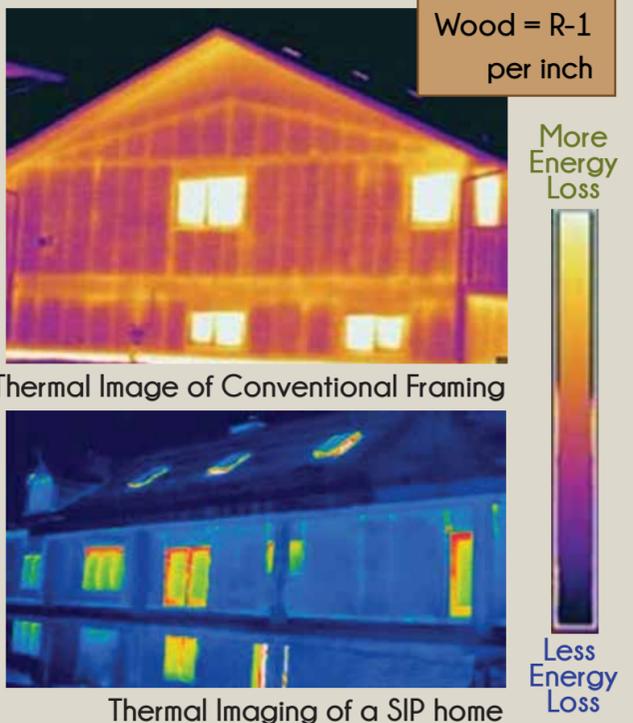
6 1/2"	Effective R= 22.3
8 1/4"	Effective R= 29.2
10 1/4"	Effective R= 35.8
12 1/4"	Effective R= 40.8

As outside temperatures cool, the R-value of fiberglass insulation decreases while ridged EPS foam increased from 4.2 per inch to 4.4.

- Source: Studies conducted by the DOE's Oak Ridge National Laboratories

Thermal Bridging?

Thermal bridging is caused by breaks in insulation where energy can be conducted through other materials, such as stud walls.



Thermal Image of Conventional Framing

Thermal Imaging of a SIP home

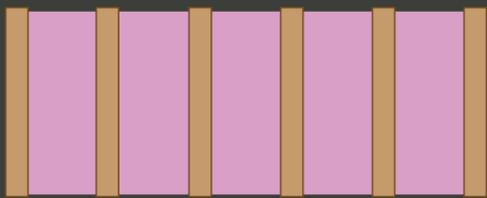
Wood = R-1 per inch

More Energy Loss
Less Energy Loss

Air Tight



Combating Energy Lost via Convection (air moving through the envelope)



Conventional Stud Wall

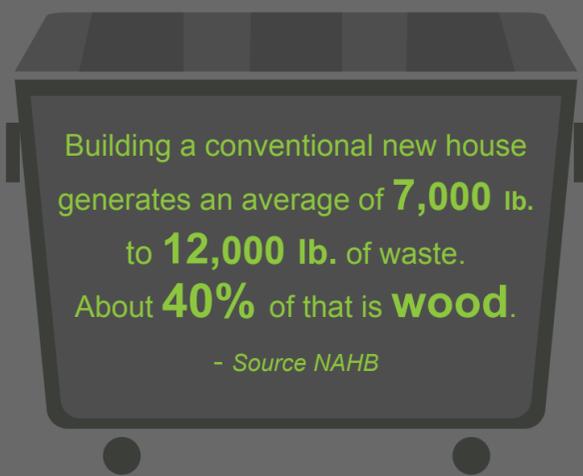
- Insulation breaks every 16 inches
- Effectiveness is reliant on proper installation
- Gaps can form if insulation falls or degrades



SIP Wall

- SIP walls come in solid panels up to 8' x 24'
- The rigid EPS foam is a continuous wall of insulation
- EPS insulation does not change or off-gas leaving gaps

Less Waste



Building a conventional new house generates an average of **7,000 lb.** to **12,000 lb.** of waste. About **40%** of that is **wood**.

- Source NAHB

Pre-Fab Advantage

- Panels arrive on-site ready for installation.
- Waste created during manufacturing is recycled or reused in the facility

Fast Construction

Time = Money

Average time to Build

6 months*

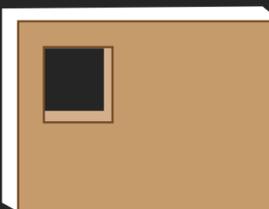
Conventional on-site construction

5 months

Home with Panelized SIP Envelope

* 2015 Census Bureau

FAQ's



How are windows cut? Windows & doors are pre-cut and bucked with lumber for easy install later in the field.

What about plumbing? Plumbing never goes in exterior walls therefore it is not a concern.

Where does the electrical go? Wire chases are bored into the EPS with heated wires at optimal heights for switches and plugs. They can be customized as well.

Contact us with questions or to get more details about building a Point Zero Home.

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SIP data is specific to Insulspan brand SIPs, including fabrication details, building times, sizes and panel thickness.



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