

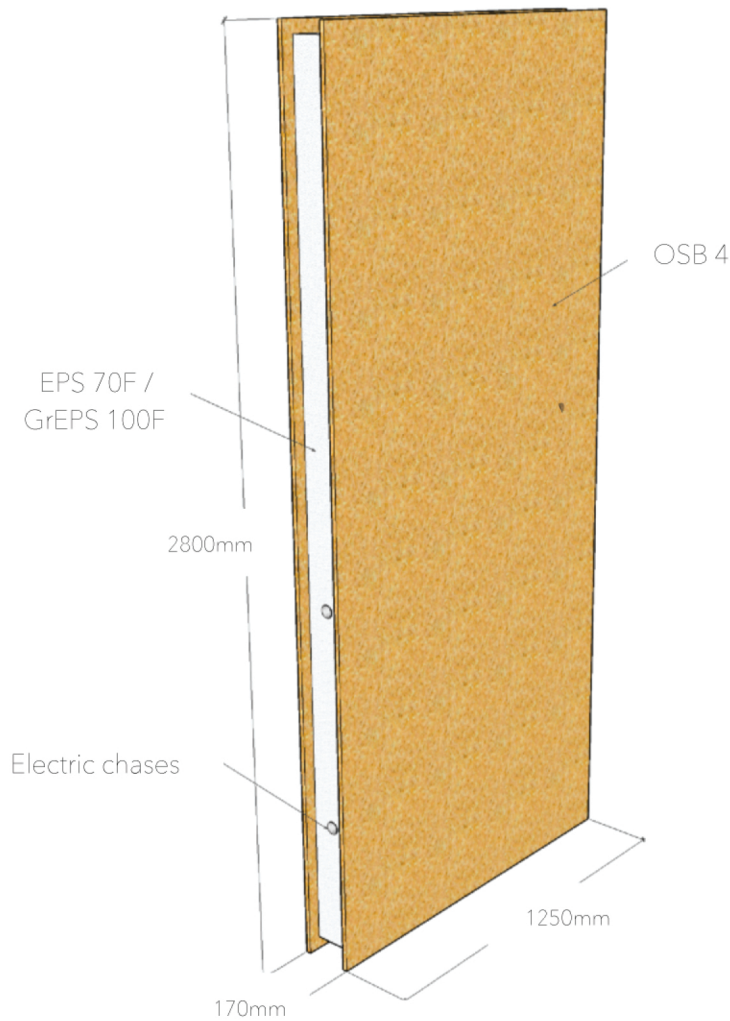


PiEmme srls

Structural Insulated Panel

Universal
building system





Panel is the Basic !

SIP - Structural Insulated Panel is a universal building system for low energy and passive buildings.

The building system is based on a sandwich panel. The panel consists of two sheets of OSB4 and an insulated core that forms expanded self-extinguishing polystyrene EPS or PUR.

The result is a self-supporting construction panel that has excellent thermal insulation properties.

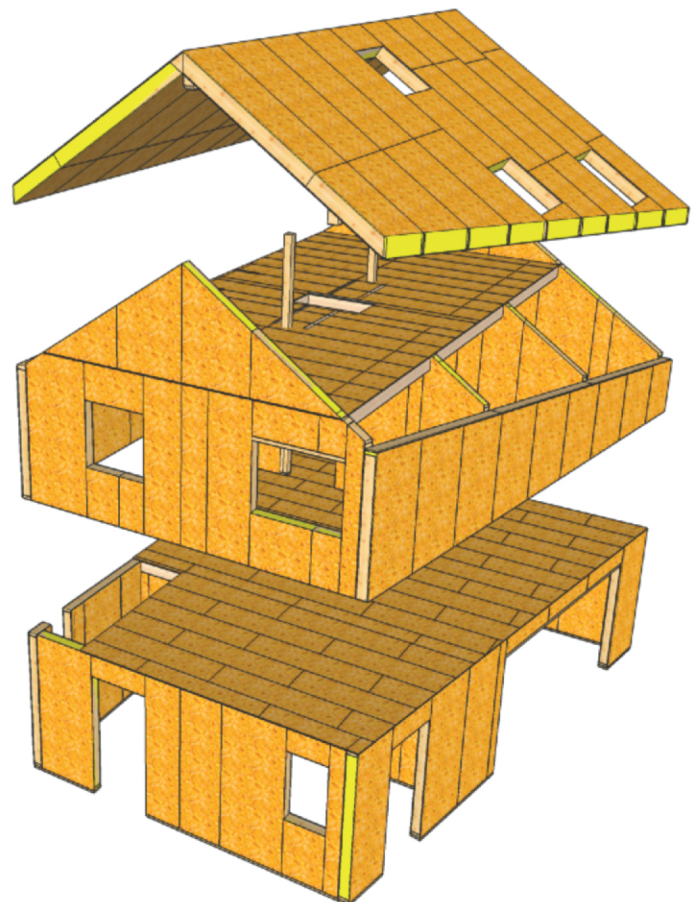
One system for the entire construction !

New requirements and the current legislation requires even greater attention during the design and building process. The prevention of thermal bridges and the air-tightness of the building structure is increasingly important.

With SIP's you can easily solve floors, external perimeter walls, interior partitions and roofs without unnecessary thermal bridges and with high level of air-tightness.

SIP's can be applied as the only building system for the entire building envelope, but it can be combined with other building systems.

The possibilities of using SIP's is almost everywhere. Recreational buildings, family houses, administrative buildings, residential buildings, schools, halls and houseboats. You can use it for extensions and superstructures as well.





Panels are manufactured under controlled factory conditions. Pre-cut and prefabricated panels can reduce installation time on site by 60%. The building process requires less skilled labor and less supervision. Structural superiority has been proven by independent testing and decades of proven use in the Northern parts of America and Canada. Once completed, panel structure forms a monolithic shell which is up to five times stronger than a traditional frame structure and is a popular building method in areas that subject to earthquakes, tornadoes and hurricanes.

SIP's have many advantages for the users, architects, builders or even developers.

> Design Flexibility

Panels create new possibilities of design without the constraints of conventional building materials.

> Construction benefits

Pre-cut and prefabricated panels can reduce installation time by 60%. The building process requires less skilled labor and less supervision. Special tools are not required and fixed pricing allows budgets to remain accurate.

> Thermal performance

Panels can offer a thinner wall thickness than conventional wall and still deliver improved insulation values, gaining greater internal spacer for the same size overall footprint. Energy cost can be reduced by up to 60% over traditional constructions.

> Strong

Once completed, Panel structure forms a monolithic shell up to five times stronger than a traditional frame structure. This provides a building with a very robust and solid feel which can be indistinguishable from a traditionally constructed buildings once completed.

> Airtight

SIP structures provides the highest quality of airtightness which is required for modern ventilation systems that reduce energy cost and improves air quality.

> Reduce cost

Panel structure creates a lighter building envelope than brick or block and therefore you could allow for a reduced foundation design.

The structure simplifies the process of construction and can reduce construction time by up to 60%. Faster building program will reduce the overall costs of project management, and in turn it will also reduce the costs of hiring scaffolding, crane, safety and security equipment and temporary accommodations. The panel construction



Thermal properties of the SIP panels

SD SIP Panel (thickness)	110mm	170mm	210mm	270mm
Sheet OSB4	2x 15mm	2x 15mm	2x 15mm	2x1 5mm
Insulated core EPS 70F or GREPS 100F	80mm	140mm	180mm	240mm
Heat transfer coefficient $U = W/(m^2 \cdot K)$	1- 0,38 2- 0,34	1- 0,25 2- 0,21	1- 0,20 2- 0,17	1- 0,15 2- 0,13
Thermal resistance $R = m^2 \cdot K/W$	1- 2,59 2- 2,73	1- 3,93 2- 4,61	1- 4,97 2- 5,86	1- 6,57 2- 7,73

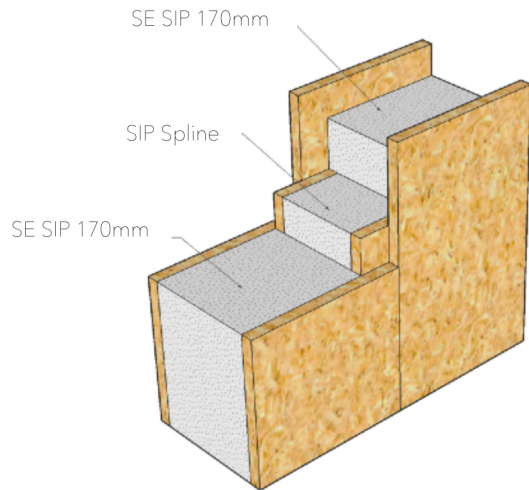
1- EPS 70F

2- GREPS 100F (EPS with graphite)

Basic panel dimensions

Panel thickness	Width	Height	Weight
SE SIP 110mm	1250mm	2500 / 2800 / 3000mm	21,8 kg/m ²
SE SIP 170mm	1250mm	2500 / 2800 / 3000mm	23 kg/m ²
SE SIP 210mm	1250mm	2500 / 2800 / 3000mm	23,8 kg/m ²
SE SIP 270mm	1250mm	2500 / 2800 / 3000mm	24,8 kg/m ²





SIP Spline - Connection element

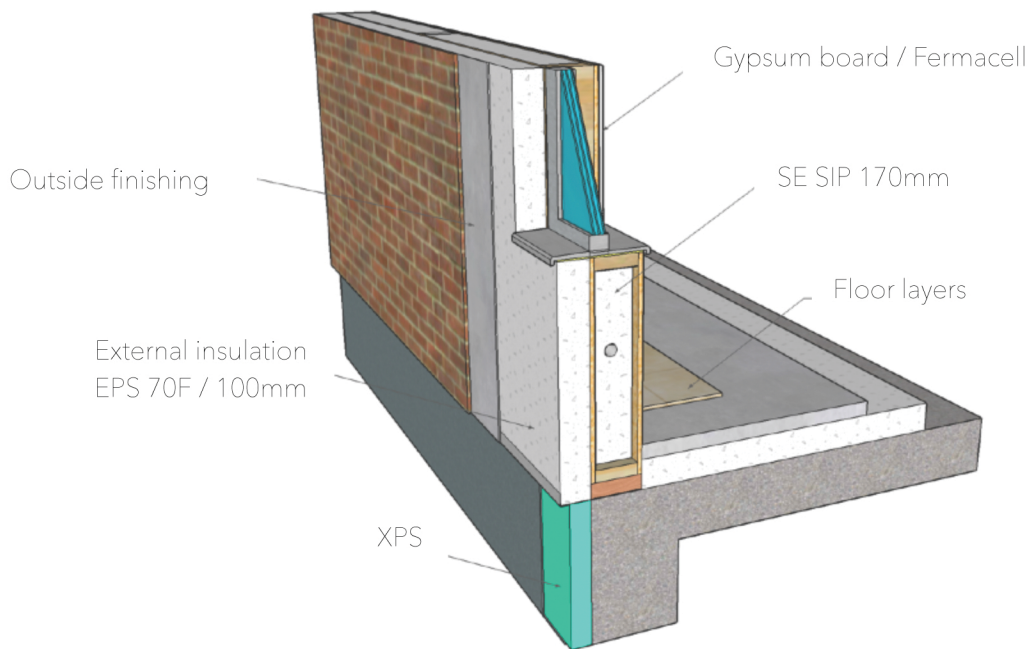
An important part of the building system is an isolated connection element called SIP Spline. This prevents interruption of the insulation core and excessive thermal bridges.

The material needed to complete the rough building, you will get as one package. This will reduce the overall costs of the project management.

Panels are produced in standard sizes of wooden construction beams. The delivery of the building system includes certified KVH, BSH construction wood beams in C24 and GL24h category or glued I-Beams. Their amount and size depends on the static assessment of the panel structure.



The delivery also includes the necessary fasteners, PUR foams, joist hangers, sealants and tapes for finishing the panel structure.



Basic wall section	Thermal resistance $R = \text{m}^2 \cdot \text{K} / \text{W}$	Heat transfer coefficient $U = \text{W} / (\text{m}^2 \cdot \text{K})$
12,5mm Gypsum board + 30mm UD/CD profile + SE SIP 170mm + 100mm EPS + 8mm plaster	6,67	0,15
12,5mm Gypsum board + 30mm UD/CD profile + SE SIP 170mm + 150mm EPS + 8mm plaster	7,96	0,13

Mechanical resistance of the wall constructions

External wall	Medium term in vertical direction (kN/m)	Combination of loads Medium term in vertical direction (kN/m)	Combination of loads Short term perpendicular to wall (kN/m ²)	Short term perpendicular to wall (kN/m ²)	Short term, Racking resistance (kN)
	190,37	150,21	3,00	4,50	2,49

Fire resistance of the construction

Construction	Panel type	Fire resistance	Note
External wall	SE SIP 170	R 30	Gypsum board SDK type F min 12,5mm
	SE SIP 170	R 45	Gypsum board SDK type F min 18 mm
	SE SIP 170	R 60	Double layer gypsum board SDK type F min 15mm



Direttamente dal produttore con 10 anni di garanzia!



CONSEGNA
VELOCE



10 ANNI
DI GARANZIA



PAGAMENTO
SICURO



SODDISFAZIONE
GARANTITA

Contatti

Siamo sempre al Vostro servizio e pronti ad affiancarvi nei Vostri progetti. Contattateci ai numeri sotto elencati per preventivi gratuiti senza impegno

Divisione Cabine e Chioschi Bar

Rif. Responsabile Tecnico Commerciale
Mauro Polleschi
mob: +39 349 69 50 184

info@piemme-italia.com

Case Campings e Abitazioni

Rif. Responsabile Commerciale
Isabella Piccaro
mob: +39 339 78 81 603

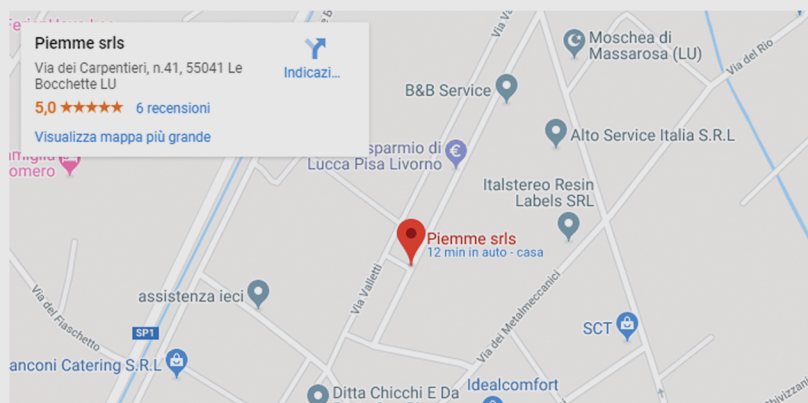
ip.casettechioschi@gmail.com

Case Galleggianti

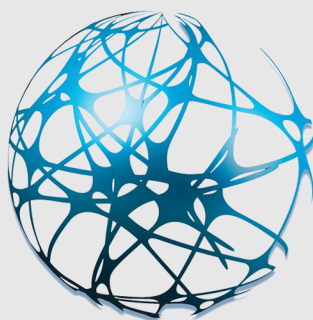
Rif. Responsabile Tecnico Commerciale
Mauro Polleschi
mob: +39 349 69 50 184

info@piemme-italia.com

Piemme - Casette Cabine e Chioschi



Piemme
S. Operativa: Via Dei Carpentieri, 41
55041 - Z.I. Le Bocchette
Camaione (LU) - Italy



PiEmme srls