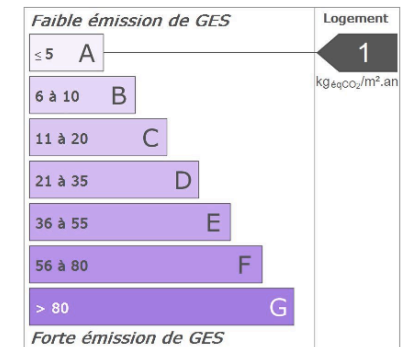
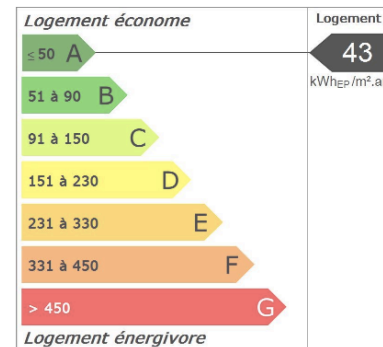


SIP CONSTRUCTION

BUILDING ECO IN THE ALPS



Creating low energy or even passive properties that achieve AA energy ratings and significantly reduced household bills

STRUCTURAL INSULATED PANELS (SIPS)

SIP properties can easily achieve the French government's thermal regulations RT2012 / RE2020.

The highly energy efficient panels themselves give R-values of up to 7.5 m² k/w - further improved with additional insulation and plaster board. The airtight construction creates as few as 0.08 air changes per hour, easily passing the air leakage test required by RT2012. Using heat recovery on a mechanical ventilation system, heat pump and other eco-friendly systems, SIPs can be used to create a passive home - even in the Alps. The panels (weighing a maximum of 29kg/msq) create an insulated structural frame which is 5x stronger than traditional timber frame. The structure is installed in just 7-21 days and comes with a 50-year warranty.



SE SIP

Expanded flame-retardant EPS polystyrene core
15mm OSB TOP4 + EPS 70F + 15mm OSB TOP4
Standard width 1250mm
Standard height 2500 / 2800 / 3000mm

Name	Weight	Thermal resistance R
SE SIP 110mm	22 kg / m ²	2,18 m ² .K/W
SE SIP 170mm	23 kg / m ²	3,65 m ² .K/W
SE SIP 210mm	24 kg / m ²	4,62 m ² .K/W
SE SIP 270mm	25 kg / m ²	6,08 m ² .K/W



SE SIP NEOPOR

NEOPOR graphite polystyrene core
15mm OSB TOP4 + GrEPS 100F + 15mm OSB TOP4
Standard width 1250mm
Standard height 2500 / 2800 / 3000mm

Name	Weight	Thermal resistance R
SE SIP GrEPS 110mm	22 kg / m ²	2,66 m ² .K/W
SE SIP GrEPS 170mm	23 kg / m ²	4,47 m ² .K/W
SE SIP GrEPS 210mm	24 kg / m ²	5,69 m ² .K/W
SE SIP GrEPS 270mm	25 kg / m ²	7,50 m ² .K/W



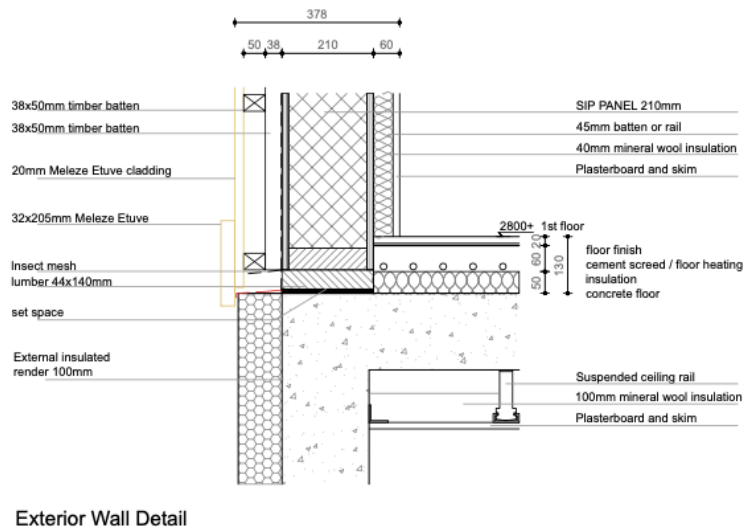
SE SIP PIR

Polyurethane / polyisocyanurate core
15mm OSB TOP4 + PIR + 15mm OSB TOP4
Standard width 1250mm
Standard height 2500 / 2800 / 3000mm

Name	Weight	Thermal resistance R
SE SIP PIR 110mm	25 kg / m ²	3,43 m ² .K/W
SE SIP PIR 170mm	27 kg / m ²	5,83 m ² .K/W
SE SIP PIR 210mm	29 kg / m ²	7,43 m ² .K/W

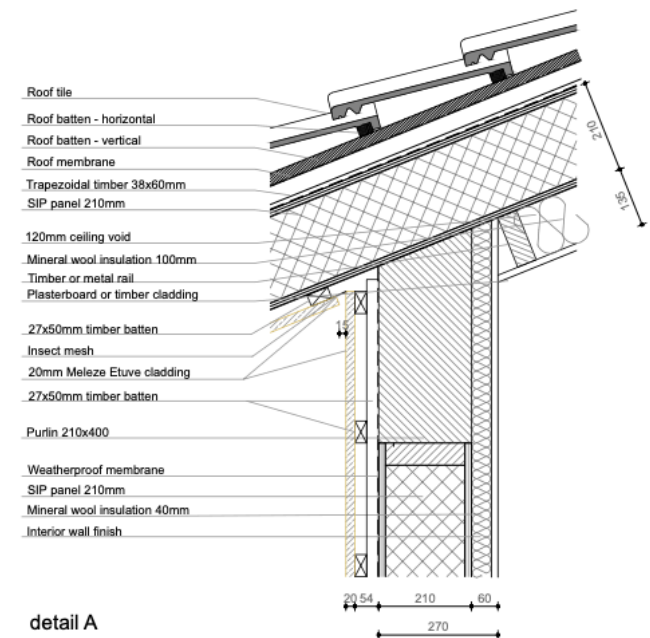
CONSTRUCTION DETAILS

The internal face of the external walls are left battened out ready to receive plasterboard, and for the creation of a service void to accept cabling & electrical back-boxes, which can be infilled with Rockwool insulation as part of internal fit out. A service void in the ceiling should also be created to accommodate lighting, ducting etc and this can be filled with insulation during internal fit out. The SIP structure is quick, flexible and easy to fix to for all tradespeople.



Wall Construction	R Value m2 K/W
SE SIP NEOPOR 210mm	5.69
Rockwool Insulation 40mm	0.9
Plasterboard BA13 13mm	0.45
Overall Value	7.04

Roof Construction	R Value m2 K/W
SE SIP NEOPOR 210mm	5.69
Rockwool Insulation 100mm	3
Plasterboard BA13 13mm	0.45
Overall Value	9.14



DESIGN OPTIONS

Traditional or modern - SIP buildings offer complete flexibility of design. We use certified KVH and BSH structural timber in strength class C24 and up to GL32h, wooden bonded I-joists or CLT (Cross Laminated Timber) panels. Combined with traditional carpentry we can create Alpine chalets with exposed beams, or create a completely modern look with large open span CLT unsupported floors.

STRUCTURAL TIMBERS

Standard:

- Solid pine

Upgrade:

- I-beams (lightweight, allow services to pass)
- Traditional carpentry on exposed structure
- CLT floor



TYPES OF TIMBER

Standard:

- Pine

Upgrade:

- | | |
|----------------------|----------------|
| • Visible-grade pine | • Glulam larch |
| • Brushed pine | • Solid larch |
| • Glulam pine | • Solid oak |