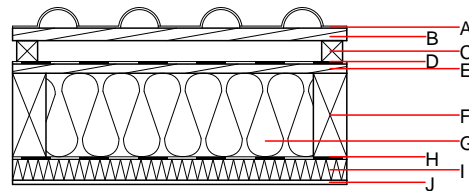
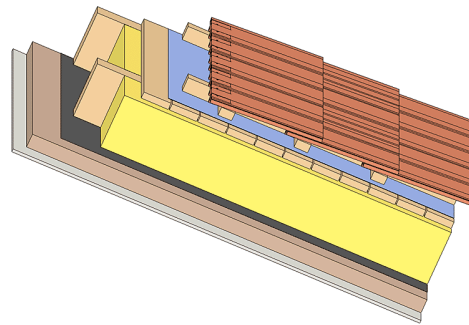


Pitched roof - sdrhzi10a-08

pitched roof, timber frame construction, ventilated, with dry lining, directly, other surface

Performance rating

Fire protection performance	REI	60
maximum span = 5 m; maximum load $E_{d,fi} = 1,32 \text{ kN/m}^2$ Classified by HFA		
Thermal performance	U Diffusion	0.15 $\text{W}/(\text{m}^2\text{K})$ suitable
Calculated by HFA		
Acoustic performance	$R_w (C;C_{tr})$ $L_{n,w} (C_i)$	51(-3;-9) dB
Assessed by TGM		
Mass per unit area	m	111.70 kg/m^2



Note: glass wool - injected insulation

Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

	Thickness	Building material	Thermal performance				Reaction to fire EN
			λ	μ min – max	ρ	c	
A		concrete roof tile or tiled roof				2100	A1
B	30.0	spruce wood battens (30/50)	0.120	50	450	1.600	D
C	50.0	spruce wood battens (min. 50 mm)	0.120	50	450	1.600	D
D		sarking membrane $sd \leq 0,3\text{m}$				1000	E
E	24.0	planking spruce wood closed cladding without spacing of cladding boards	0.120	50	450	1.600	D
F	240.0	construction timber (80/...; e=800)	0.120	50	450	1.600	D
G	240.0	Supafil Timber Frame [034; R=35]	0.034	1	35	1.030	A1
H		vapour barrier $sd \geq 6\text{m}$				1000	
I	50.0	Heraklith BM	0.090	2 - 5	370	2.000	B
J	10.0	plaster	0.700	10	1300	1.000	A1

Sustainability rating (per m^2)

Database ecoinvent

$OI3_{kon}$ 44.5

Calculated by HFA

Details of sustainability rating

Database ecoinvent

Lifecycle (Phases)	GWP [kg CO ₂ -e.]	AP [kg SO ₂ -e.]	EP [kg PO ₄ -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.187	0.084	4,02E-6	0.032	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	111.929	583.912	695.840	642.706	10.862	653.569