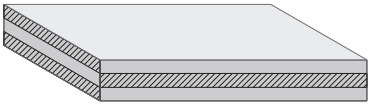
PRODUCT INFORMATION

Material Properties

Wood species	Spruce, Larch, Douglas Fir
Standard speices used	Spruce (*Picea abies)* or whitewood
EN reference	PCAB
Surface grade	B Sanded exposed for special applications
	C Sanded exposed for normal applications
	D Non exposed
Moisture content	10% ± 2%
Water vapour resistance factor	40 - 80 μ
Thermal conductivity λ_D	0.12 W/mK
Panel adhesive	formaldehyde-free single component PU adhesive
Panel quality	edge-glued outer faces (rain resistant and airtight)
Carbon storage	215 kg/m³ (788 kg/m³ CO_2e)
Calorific value	4.6 kWh/kg

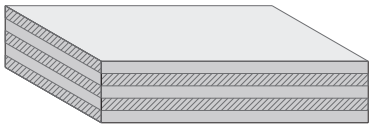
SPRUCE CROSSLAM



CL3

Panel Dimensions

Maximum size (length x width)	13.5 m x 3.40 m
Depth	75 - 500 mm
Depth of 3 layers (CL3) panels	75mm, 80mm, 90mm, 100mm, 115mm, 120mm, 125mm
Depth of 5 layers (CL5) panels	140mm, 150mm, 160mm, 175mm, 180mm, 200mm, 225mm, 250mm, 300mm
Weight	450 - 500 kg/m³



CL5

GRADE B

Product Appearance

Panel Features	B Visual	C Exposed	D Structural
bonding	no open glued joints	glued joints ≤100mm/m	visible glued joints
colour & grain	well balanced	mainly balanced	mixed
knots	healthy solid knots	a few black knots	yes
repairs	natural knot dowels and individual pitch pockets ≤ 40mm long	knot dowels and individual pitch pockets ≤ 50mm long	yes
fisures	individual surface fisures	individual surface fisures up to 50mm length	yes
discolouration	no	minor	yes

GRADE C

GRADE D

STRUCTURAL INFORMATION

Load Guidance

Imposed Load - use (n_k)	**Category**	**kN/m²**	**kN**
domestic and residential	A	1.5 to 2.5	2.0 to 3.0
office	B	2.5 to 3.0	1.5 to 4.5
schools and areas where people congregate	C	2.0 to 3.0	3.0 to 4.0
retail	D	4.0 to 5.0	3.5 to 7.0
plant rooms		7.5	
Dead Load - material (g_k)			
Standard C24 panel		5 kN/m³	
Typical floor build-up		1.5 to 2.0	

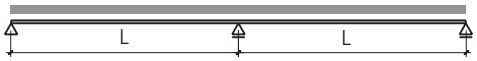
DISTRIBUTED LOADS $g_k + n_k$ **kN/m²**	**SPAN L**			
	3M	4M	5M	6M
	PERMITTED FINAL DEFLECTION L/250			
	SINGLE SPAN			
2.5	CL3-80	CL3-100	CL5-160	CL5-180
3.0		CL3-120		
3.5	CL3-100		CL5-170	CL5-200
4.0				CL5-225
4.5				
5.0		CL5-140		CL5-250
5.5	CL3-120		CL5-180	
6.0		CL5-160		
6.5				
7.0	CL3-140		CL5-200	

SPAN L			
3M	4M	5M	6M
PERMITTED FINAL DEFLECTION L/250			
DOUBLE SPAN			
CL3-75	CL3-80	CL3-120	CL5-150
	CL3-100		CL5-170
	CL3-115	CL5-150	
	CL3-120	CL5-170	CL5-180
CL3-80			CL5-225

R0
R30
R60
R90

fire resistance (minutes)

single span



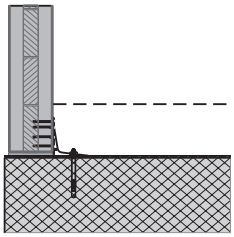
double span

The purpose of these tables is to initially size CL and does not replace any structural calculations. The load is to be given as an evenly distributed surface load. Measurements in accordance with Eurocode 5 and ETA-08/0238. The CL self-weight is included in the calculation and does not have to be taken into account.

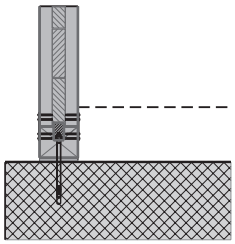
Wall Thickness

Building Type	**Floor to Floor Height**	**Number of Storeys**	**Wall Panel Thickness**
domestic and residential	3M	1 to 3	80-100mm
		4 to 6	120-140mm
schools and offices	4M	1	80-100mm
		2	120-140mm

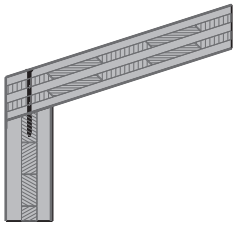
TYPICAL DETAILS



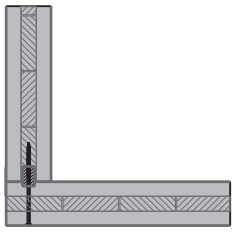
D1 BASE POINT SOLE BRACKETS



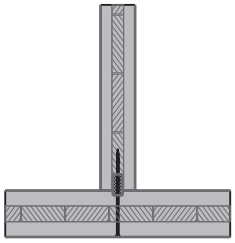
D2 BASE POINT SOLE PLATE



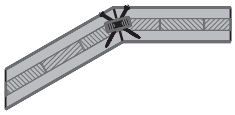
D3 ROOF EXTERNAL WALL JOINT



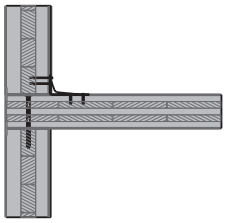
D4 CORNER WALL JOINT



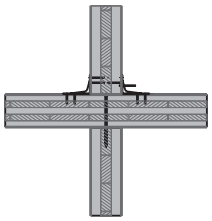
D5 T-WALL JOINT



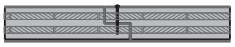
D6 ANGLE WALL JOINT



D7 FLOOR EXTERNAL WALL JOINT

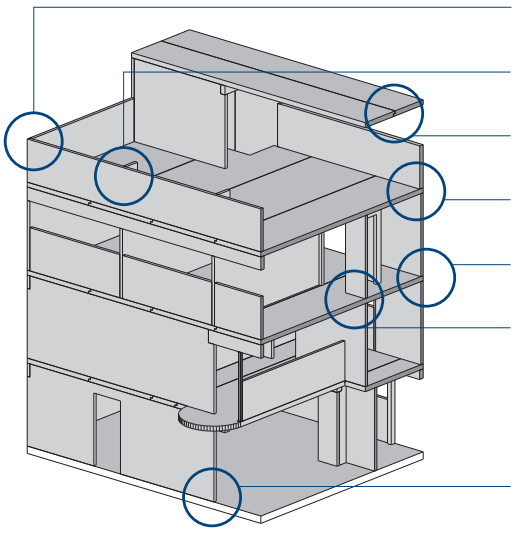


D8 FLOOR INTERNAL WALL JOINT



D9 FLOOR/ROOF PANEL JOINT

Luigi Snozzi designed the Guidotti House which was built using concrete in Monte Carasso, Switzerland in 1984. The axonometric drawing illustrates how his design could be built using CROSSLAM with associated details. Engineered timber is a sustainable alternative to steel and concrete construction.



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