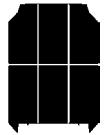
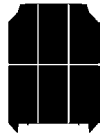


CROSSWISE LAMINATED LOG FXL 128

Product description:	cross-glued laminated log consisting of four horizontal-wood side lamellas and two vertical-wood middle lamellas
Wood:	pine
Corner bond:	normal, traditional staggered seam, see Pictures 5 and 6
Notch:	ball notch
Log profile:	tongued and grooved, symmetrical, narrow seam on both sides
Settling:	non-settling (similar to a vertical frame wall with moisture-induced deformation of no more than approx. 0.1%); the non-settling characteristic is achieved by using a vertical-wood middle lamella and a WOW (Wood-On-Wood) profile, tight bolting that eliminates installation clearances, and special drying of the log to 12%
Seam and notch sealing:	<ul style="list-style-type: none"> - seam sealing: two adjacent ProTech sealing tapes of 18 mm width (SAP: RU11450), one face of the tape has an adhesive surface and both edges have an impregnated moisture barrier - notch sealing: staple-attached ProTech sealing tape of 90 mm width (SAP: RU11100), both edges of the tape have an impregnated moisture barrier
Log dimensions:	<ul style="list-style-type: none"> - width of log 128 mm - rise of log 260 mm - total height of log 270,5 mm
Log lengths:	<ul style="list-style-type: none"> - maximum 11700 mm - minimum 200 mm
Log weight:	~ 15 kg/m at manufacturing moisture at the factory
Length of log corner:	<ul style="list-style-type: none"> - normal 300 mm - minimum 170 mm
Cage (city) corners:	manufactured to 170 mm length at the factory, cut to 104 mm on site (128/2 + 40 = 104 mm) and enclosed
Diagonal corners:	no



U-value of log wall:	0,81 W/m ² K
Fire rating:	in preparation, to be determined by VTT
Log partition walls:	yes
Light partition walls:	depth of partition groove to be made in the log 25 mm
Columns:	glued 110x110 mm
Panels:	the glued FXL 25x279 panel exactly corresponds to the profile of the log, the panel gain (rise) is 260 mm, SAP code L987
Log capping:	25x117, SAP code L220, see Picture 2
Certificate / CE marking:	inclusion of the log in European Technical Approval (ETA) is in preparation, estimated completion in February 2009
Product protection:	<ul style="list-style-type: none">- utility patent for a non-settling vertical-wood log structure in Finland, Germany and Austria, valid until 7/2010- structure and profile of the cross-glued log enjoys EU design protection (registered design)
Basic technology:	<ul style="list-style-type: none">- dowelling: the logs are dowelled normally, dowel size: 25x25x400 mm- T-battens: no T-battens are installed at door and window joints but doors and windows are attached directly to the logs; otherwise the installation is similar to a vertical frame structure, with a minimum of 10 to 15 mm of installation/insulation gap between the log and door or window frame on each side → the lack of T-battens enables very narrow weatherboard solutions, see Picture 1- settling margins: no settling margins are required for the logs to settle, operation is similar to vertical frame houses- tightening bolts: in order to ensure non-settling of the logs and uniform quality of narrow seams, every wall shall be tightened with at least two tightening bolts; a tightening bolt line may also be made in the middle of long walls at the wall designer's discretion; bolting shall be done in parts, 5 to 7 log layers at a time, extending the bolt with a coupling nut as the wall becomes higher; separate installation instructions will be available later- starting logs: the bottom surface of the lowest complete log is always evened out but the rise is the same as that of other complete logs, 260 mm (the rise is measured at the highest point of the top surface – that is, on top of the tongue), the rise of a half log is 130 mm (the rise is measured at the highest point of the top surface – that is, on top of the tongue)
Protection and surface treatment:	<ul style="list-style-type: none">- the top surfaces of all logs exposed to rain (such as the top surfaces of crossed corners, the top surfaces of log beams and binding logs, the top surfaces of log projections such as the ends of intermediate floor logs penetrating the exterior wall etc.) must always be protected, for example using a board and surface finish, principle shown in Picture 3- the top and bottom surfaces of logs at all visible (non-enclosed) external crossed corners from the notch outwards, as well as the outer ends of the logs, are pre-treated at the factory with colourless Teknos Teknol JRM protective agent to prevent cracking of the log ends, otherwise the general surface treatment instructions for logs shall be observed- a translucent wood protective agent (such as Tikkurila Valti Color) leaves a striped appearance of the middle lamella visible at the ends of cross corners, see Picture 4; an opaque wood protective agent (such as Tikkurila Vinha) covers the stripe, outer surface treated with Vinha in Picture 1 (house in the picture is made of NXL 204 logs)



Notes:

- FXL 128 and NXL 128 profiles can be normally interlocked
- outdoor railings must not be made of FXL 128 logs
- strength of log beams:
 - * bending and shear capacities calculated only on the basis of horizontal lamella capacities

Picture 1.



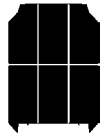
Picture 2.



Picture 3.



Picture 4.



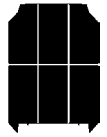
Pictures of inner surface of FXL 128 wall:



Picture 5. Log surface treated with colourless water-based lacquer.



Picture 6. Log surface treated with white water-based lacquer.



Close-up picture of inner surface of FXL 128 wall:

Picture 7.

