

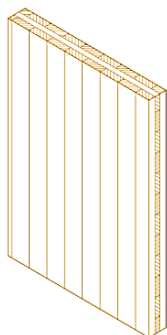
Soundproofing of CLT internal wall structures

STORA ENSO WOOD PRODUCTS GMBH

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Even if there are no specific soundproofing requirements for individual rooms within an apartment, sound insulation should still be borne in mind when planning buildings to ensure privacy and provide protection against noise. In addition to ensuring an acoustically favourable layout of rooms in the building, it also makes sense to incorporate individual structural components with high-quality sound insulation between noisy and quiet areas or between rooms used for different purposes (e.g. between living areas and bedrooms).

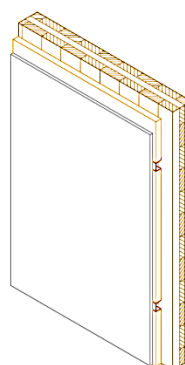
To support planners in selecting the appropriate structure, the sound insulation of a 100 mm-thick CLT wall with different types of cladding underwent a series of measurement tests in the laboratory for building physics at the Technical University of Graz.



CLT unfinished wall 100 mm

100mm Stora Enso CLT

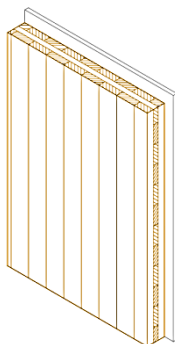
R_w (C;C_{tr}): 34 (-1;-3) dB



Spring clip

100 mm StoraEnso CLT
27 mm spring clip
12.5 mm fire protection
plasterboard

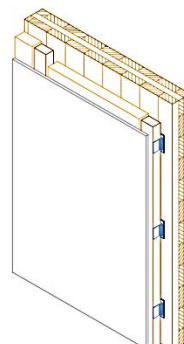
R_w (C;C_{tr}): 48 (-5;-12) dB



Fire protection plaster board on one side

100mm Stora Enso CLT
12,5mm fire protection
plasterboard

R_w (C;C_{tr}): 37 (-1;-3) dB



Spring hoop

100 mm StoraEnso CLT
3 mm joint-sealing tape
50 mm spring hoop
(intermediate layer of
mineral wool)
12.5 mm fire protection
plasterboard

R_w (C;C_{tr}): 51 (-2;-8) dB

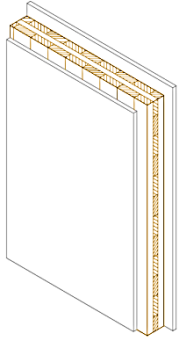


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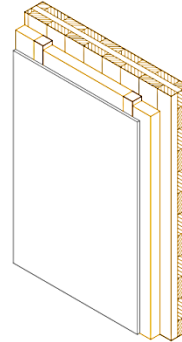
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Fire protection plaster board on both sides

12.5 mm fire protection plasterboard
100 mm StoraEnso CLT
12.5 mm fire protection plasterboard

$R_w (C;C_{tr})$: 37 (-1;-3) dB



Wooden battens

100 mm Stora Enso CLT
50 mm wooden batten
(intermediate layer of mineral wool)
12.5 mm fire protection Plasterboard

$R_w (C;C_{tr})$: 45 (-1;-5) dB



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