

Solid wood panels

Solid wood panels:

- 1-layer edge jointed panels
- multi-layer panels (Cross-Laminated Timber, CLT, KLH)

Single-layer panels

- Edge-jointed panels
- Typically made with simple straight (butt) joints
- Tongue-and-groove, finger joints, etc. – typically used for positioning, rather than strength!

Some variations:

- Parallel or conically edged material
- Ring orientation
- Star-sawing

Technology:

- Drying
- De-stacking
- Cross-cutting, finger-jointing
- Cross-cutting to length
- Planing (rectangularity is important!)
- Glue application (rollers, curtain coaters or nozzle-coaters)
- Layup (ring-orientation!)
- Pressing
- Post-pressing, storage

Multi-layer cross-laminated panels (CLT)

- Relatively new invention, increasingly popular
- Cross-laminated structure, similar to plywood, but made of lumber
- Advantages:
 - * Simple, versatile and flexible system
 - * Easy to cut and shape
 - * High strength
 - * Advantageous physiological properties
 - * May be combined with extra insulation
- Disadvantage: Not very economic in terms of raw material.
- More about its use when discussing building systems (special types).

Technology:

- Similar to glulam in terms of drying, laminate fabrication, glue application, etc.
- Using high quality, scot-free material is important to prevent splits and delaminations
- Usually face-gluing only
- Pressing: special presses that allow lateral pressing, as well as face-pressing.
- See videos for further details