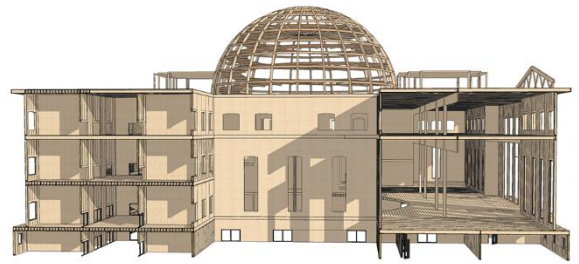


How to build wooden Reichstag?

- Sustainability has become a prerequisite for construction and energy efficiency is regulated by laws in new buildings, especially in Germany.
- While work of the German Parliament is mainly focused on environmental legislation, it makes sense that the historical building should be as sustainable as possible.
- Sustainability and energy efficiency in construction favours wood: wood construction is the best way to meet the dual challenge of housing a growing population and battling climate change. Engineered wood products are light, strong and sustainable, and even Wi-Fi friendly.
- Metsä Wood's Kerto® LVL is the most modern construction material, which fulfills all the requirements of ecological construction.



Reichstag is actually three buildings in one

1. Entrance with wooden columns:

- Kerto-Q LVL panel would have used for the roof of the Reichstag's entrance for four reasons. It would 1) transfer the vertical load caused by e.g. snow on to the truss., 2) prevent buckling, 3) act as a roof bracing and 4) be a durable base for roofing.
- While Kerto LVL is so light, it is perfect for adding new floors to old buildings and for building an entrance with wood columns.
- Because of its strength, Kerto-Q LVL would be used for the top and bottom chord. Kerto-Q LVL is cross-bonded Kerto LVL, meaning that one fifth of the veneers are glued crosswise. This structure improves the lateral bending strength and stiffness of the panel, thus increasing the shear strength when used as a beam. Due to its cross-bonded structure, Kerto-Q LVL has good cracking resistance that can be utilized in connection design.

2. Wooden Dome structure:

- The dome could easily be made out of Kerto LVL by cutting the pieces into shape. The esthetical properties of wood could be shown to best advantage by using veneering or fineline. Controlled preproduction would ensure a high quality end result.
- In the Reichstag dome, hidden connections would look best. To achieve a high degree of prefabrication and to transfer heavy loads, this connection was revised for timber construction.
- Kerto-Q LVL is a load-bearing, bracing and dimensionally stable LVL panel that can be used even in the most demanding structures. It can be used in Kerto-Ripa LVL elements that enable stiff and high-quality floor and roof structures.
- Horizontal Kerto-S LVL would be used for the beams. Kerto-S LVL is suitable for all roof shapes, also performing well as joists and lintels, in trussed constructions and frames.

3. Wooden frame office:

- Constructing a wood frame office with Kerto LVL is really easy. Because it is so light and strong, adding several new floors to existing structures is simple. As the external walls can do the bracing, fewer parts are needed. For the load bearing, Kerto-Ripa LVL is the answer.