

New PlenumPanels™ for mass timber construction are half the weight and cost of solid CLT panels

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Plenum Panels™ are a new product for use in mass timber construction for floors and roofs. The engineered panels are made of common materials and incorporate plenums so they are light weight yet just as strong as solid panels made of cross laminated timber (CLT).

- PlenumPanels™ weight 60% less than solid CLT panels
- PlenumPanels™ cost about 50% less than solid CLT panels
- PlenumPanels™ span further than solid CLT panels
- PlenumPanels™ have better vibration characteristics than solid CLT panels
- PlenumPanels™ reduce sound better than solid CLT panels
- PlenumPanels™ have integral plenums that can be used to run mechanical, electrical and plumbing (MEP)

Plenum Panels™ are unique engineered wood panels that offer a game changing lighter alternative to solid panels for mass timber construction. Mass timber is becoming increasingly popular as a lighter alternative to steel and concrete construction for offices, schools, hospitality and multiple residences.

Plenum Panels™ cost much less than solid CLT and perform better structurally. The plenums provide space to run and conceal MEP saving on trades and not compromising structural integrity. They have a much higher natural frequency so vibration is not a controlling design factor, as it is for solid CLT. And, Plenum Panels™ have a higher STC which reduces sound transmission.

Allowable spans are greater than for the same thickness of solid CLT because the span is not controlled by vibration as is the case with CLT, despite utilizing less wood.

The inventor, James Walker, **PE**, (**MS**, Arch.Engr PSU, **MBA**, St.Thomas University, **BS**, Civil Engr, Clemson University) is a lifelong engineer and CEO of Innovative Structural Building Products. He developed these products over the last decade and secured 9 US patents. Several pending patents are in process from ongoing research and development. The patents are extensive and protect the panels and methods of production.

“Until now, there has been no alternative to using heavy solid timber for floor slabs and roofs. Now, mass timber buildings can be built just as strong at a fraction of the weight and cost”, James Walker, PE.

Prototypes have been manufactured and field installed. Additionally, the panels have been tested by the Advanced Structures and Composites Center of the University of Maine.

For more information, go to www.plenumpanels.com.

Plenum Panels™ are another building product offered by Innovative Structural Building Products of Franconia, NH. (www.isbp.com) Products include a range of innovations for the building industry including ventilated sheathing, air distribution flooring and cost saving foundation systems.