

EWP literature information vs software output

Dindas Australia sources Engineered Wood Products (EWP) including I-Joists (RFPI®-Joist) and laminated veneer lumber (DindasLVL®). F8 / F11 Ply Rimboard is also available through Dindas marketed as DindasRim® Rimboard.

Various sources of information are available to the project specifier, design technician and end user that aid in the proper design, layout and installation of Dindas RFPI® engineered wood products. These sources include various product information sheets, a 64-page Design Guide, an Installation Guide, Dindas Design Suite (DDS) layout software developed by Calculated Structured Designs (CSD), LayITout layout software from Carter Holt Harvey and single member design (QuickDesign.v3) from QuickDesign Systems.

The various charts and tables in the printed literature as well as calculations performed by software are generated using the allowable design properties listed in the current code reports. However, it is important to understand that there is a fundamental difference between printed literature (code reports, Design Guide and Installation Guide) and design software. Printed literature is meant to cover a wide variety of general construction conditions, whereas software is for specific conditions. For instance, the I-Joist allowable span tables in the printed literature are based on a combination of specific loads, on-centre spacing and deflection criteria from which the maximum attainable span for each given series and depth is calculated. Other charts, including the hole chart, duct chase chart and reinforced cantilever chart, are based on these same spans which have been maximized for the specific conditions. Therefore, the spans, hole locations and cantilever reinforcement requirements in the printed literature is based on a 'worst case' scenario for the given

loads and deflection criteria. The reason for using these 'worst case' scenarios in printed literature is to enable the end user to identify and install properly sized Dindas Engineered Wood Products without the need for specific design or engineering calculations.

On the other hand, software analyses and designs members for the actual spans and loading conditions for a specific application. These conditions may differ from the various assumptions that the literature charts and tables are based on. Therefore; the software design may or may not 'max out' the capabilities of the particular I-Joist. This means that the output from the software will often not agree with what is printed in the literature. The software will often allow a larger hole, or a hole closer to the bearing, or not require reinforcement on a cantilever due to the fact that the I-Joist is not pushed to its limit as is the case in the printed literature.

Dindas has partnered with Roseburg, SECA, CSD and QuickDesign Systems because of the many years of successful development and implementation of structural layout and design software around the world.

Dindas provides all the necessary material properties for the various EWP products to our trusted software business partners for inclusion in their software. The database is reviewed and updated as required by the relevant standards of Australia. Dindas believes that the DDS software system produces accurate and reliable output for all the products that we have available to the industry.

Other equally capable design software may have Dindas products in their database but no initial partnership or ongoing relationship exists between Dindas and software manufacturers other than those stated.