

PK-USA PKI Series I-joists

Requirements for Engineer's Seal

Differences between Plated Trusses and Pre-manufactured Wood I-joists

Plated trusses require an engineer's seal for each specific product profile as specified in the model building code. This requirement is due to the individual and unique nature of each truss design which considers span, loading, bearing conditions, web configuration, chord configuration and truss plate size, plate gauge, orientation and capacity. Because of these numerous variations, truss manufacturers do not publish span charts or list design properties within a code evaluation report, nor are these values listed in the model building code.

Pre-manufactured wood I-joists do not require an engineer's seal on design calculations because each product has code recognized design properties listed within their respective code evaluation report. This is similar to dimensional lumber and timber products which have published design values and allowable span tables listed in the model building code for various applications.

Code Approved Use

PKI Series I-joists are covered under 2021/2018 IBC Section 2303.1.2 and 2021/2018 IRC Section R502.1.2 *Prefabricated wood I-joists*. The section states: "Structural capacities and design provisions for prefabricated wood I-joists shall be established and monitored in accordance with ASTM D-5055." All PK-USA PKI Series I-joist has established and maintained code evaluation reports which specifically outline structural capacities and design provisions in accordance with ASTM D 5055 and are listed in Section 6.0 of its IAPMO UES-ER 0431, which confirms compliance with the relevant building codes.

Code Approved Design Properties

PKI Series I-joists may be specified using PK-USA's published literature or through proprietary software containing the products design properties, including CSD® (Calculated Structural Design) and Sapphire®. These programs specify PKI Series I-joist products for the exact loading conditions and product spans as entered by the operator. Code approved design properties are contained within the software and are not subject to manipulation by the operator.

Summary

When PK-USA's PKI Series I-joists are used in connection with a current code evaluation report and used within the published design properties of the product as outlined within that report, span tables, calculations, load tables and/or software output does not require the addition of an engineer's seal per IRC and/or IBC.

If you have any questions, please contact PK-USA for details.

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