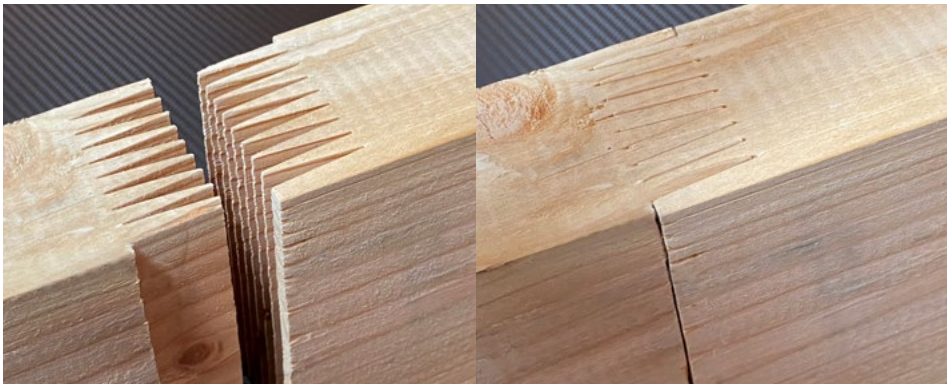
WN-Series® Joists

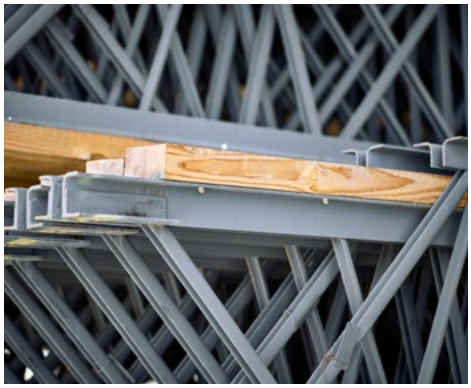
THE NEXT EVOLUTION IN HYBRID WOOD-ON-STEEL ROOF SYSTEMS

NEW MILLENNIUM

A Steel Dynamics Company

WN-Series® Joists





Glued finger joint splices make our wood nailer joists stronger, stiffer, more efficient

Our innovative WN-Series Joists revolutionize the wood nailer joist market prevalent in the United States West Coast Region. Utilizing the enhanced nailer as a structural component, this steel/wood hybrid product optimally uses each material's characteristics, resulting in a stronger, more-efficient, better-performing joist.

WN-Series Joists are open web steel joists with continuous 2½ (or 2)-inch-thick wood nailers attached the full width and length of the top chord. The wood features glued finger joint splices to maintain structural continuity the full length of the joist. The result is a joist that maximizes load supporting capabilities while providing superior ductility.

Recognized reliability

- ICC-ES-certified to comply with building codes (ICC-ESR 3376)
- Manufactured to Steel Joist Institute specifications
- WN-Series Joists conform to American Wood Council standards

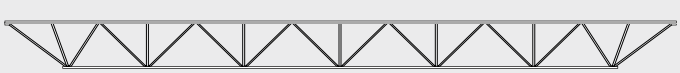
Innovative design for superior load support

WN-Series Joists are ideal for efficiently supporting concentrated loads at any location along the length of the joist. The continuous wood nailer with glued finger joints works in concert with the double-angle-steel top chord to effectively distribute loads to panel points while minimizing impact on top chord flexural stresses. Utilizing tension-controlled design, this system encourages load sharing between joists under extreme gravity over-load conditions.

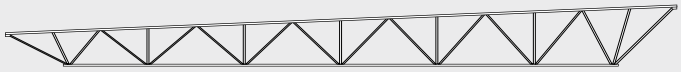
- Enhanced top chord lateral stiffness means safer handling, assembly, and erection
- Minimize nailer widths for more consistent sub-purlin cut lengths
- More load sharing between joists under extreme gravity over-load conditions

Engineered for unmatched performance

WN-Series Joists are available in two profiles: parallel chord and single-pitched top chord with either underslung or square ends with pitches up to 2 inches per foot. They are manufactured with overall depths from 26.5 inches through 50.5 inches and with spans from 24 feet through 70 feet.



PARALLEL CHORD

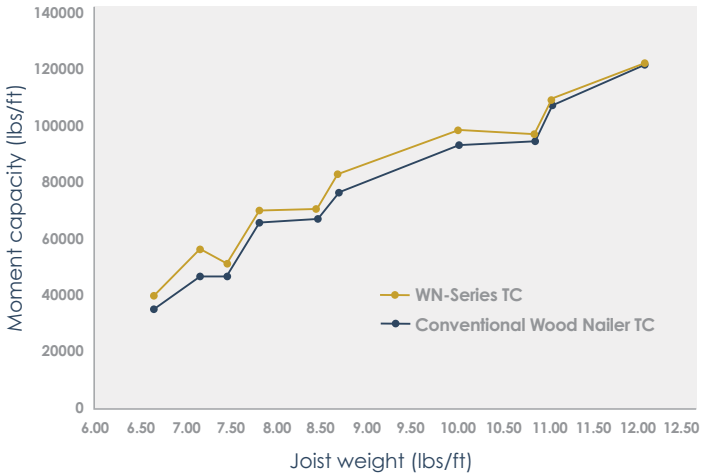


SINGLE-PITCHED TOP CHORD

How WN-Series joists compare to traditional wood-nailer joists

The overall joist design strength gained from the continuous wood nailer is small but consistent. The graph at below left shows joist design moment capacities of a random sampling of conventional wood nailer joists compared to equivalent WN-Series joists. The graph at below right shows design strengths for concentrated loads between top chord panel points for a random sampling of conventional (typical) wood nailer joists compared to equivalent WN-Series joists.

Joist Allowable Moment Capacity-vs-Weight per foot*



Allowable Concentrated Load Anywhere on Top Chord -vs- Weight per foot*

*For Joists of various spans and depths, designed as WN-Series and Conventional Wood Nailer

Downloadable WN-Series Joist catalog for design guidance and joist weight tables at newmill.com/loadtables

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