Codes & Standards > Calculators & Software > Connection Calculator

Design Method	Allowable Stress Design (ASD)
Connection Type	Lateral loading
Fastener Type	Nail
Loading Scenario	Single Shear

Submit Initial Values

Main Member Type	Douglas Fir-Larch
Main Member Thickness	3.5 in.
Side Member Type	Douglas Fir-Larch
Side Member Thickness	1.75 in.
Nail Type	Box
Nail Size	16d (D = 0.135 in.; L = 3.5 in.)
Load Duration Factor	C_D = 1.6
Wet Service Factor	C_M = 1.0
End Grain Factor	C_eg = 1.0
Temperature Factor	C_t = 1.0
Diaphragm Factor	C_di = 1.0

Calculate Connection Capacity

Connection Yield Mode Descriptions | Limits of Use

Diaphragm Factor Help | Load Duration Factor Help | Technical Help

Show Printable View

Connection Yield Modes

Im	799 lbs.
Is	799 lbs.
II	331 lbs.
IIIm	283 lbs.
IIIs	283 lbs.
IV	165 lbs.

Adjusted ASD Capacity	**165 lbs.**

- Nail bending yield strength of 100000 psi is assumed.
- The Adjusted ASD Capacity does not apply for toe-nails installed in wood members.
- Length of tapered tip is assumed to be two times the nail diameter for calculating dow main member.
- The Adjusted ASD Capacity only applies for nails that have been driven flush with the does not apply for nails that have been overdriven into the side member.

While every effort has been made to ensure the accuracy of the information presented, and a

Provides users with a web-based approach to calculating capacities for single bolts, nails, lag screws and wood screws **per the 2005 NDS**. Both lateral (single and double shear) and withdrawal capacities can be determined. Wood-to-wood, wood-to-concrete, and wood-to-steel connections are possible.

Connection Calculator available for the **iPhone**.

Connection Calculator available for the **Android OS**.

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