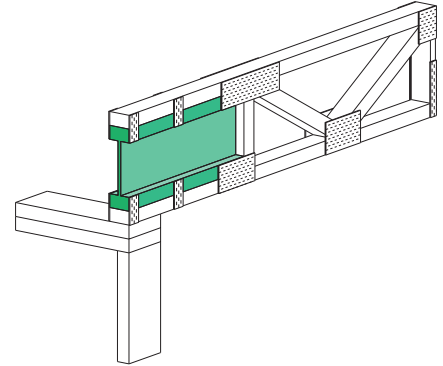


Nordic Joist Inserts

This technical note provides the design properties for I-joist inserts for use in floor or roof trusses.

This technical note is based on the following assumptions:

1. Inserts used on exterior bearings.
2. Inserts with a maximum length of 16 inches.
3. Connection detail with common nails or truss plates by others.



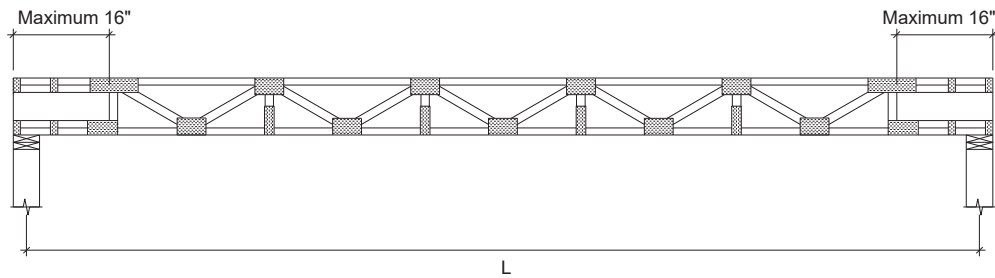
Design Properties for Nordic Joist Inserts

| Joist depth | Joist series | $V_r^{(a)}$ | 1-3/4" Bearing | | Weight |
|-------------|--------------|-------------|----------------|-----------------------|--------|
| | | | $ER_r^{(b)}$ | $ER_r^{(b)}$ w/ BS | |
| | | (lbf) | (lbf) | (lbf) | (plf) |
| 8-7/8" | NI-40x | 1,725 | 1,680 | 1,680 | 2.54 |
| | NI-80 | 1,725 | 1,725 | 1,725 | 3.12 |
| 11" | NI-40x | 2,180 | 1,955 | 2,180 | 2.79 |
| | NI-80 | 2,180 | 2,070 | 2,180 | 3.37 |
| 13" | NI-40x | 2,560 | 2,050 | 2,515 | 2.93 |
| | NI-80 | 2,715 | 2,220 | 2,655 | 3.61 |

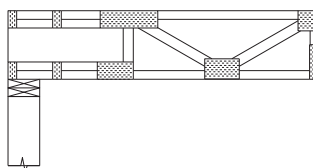
- a) Factored shear resistance, V_r , of the I-joist.
 b) Factored end reaction resistance, ER_r , of the I-joist with and without bearing stiffeners (BS).

Notes:

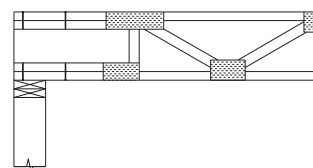
1. The tabulated design values are for standard-term duration of load ($K_D = 1.0$).
2. The factored vertical (bearing) linear load resistance is 2,900 lbf/ft without bearing stiffeners.



Elevation view of a simple span joist with inserts



Connection with truss plates (by others)



Connection with common nails (by others)