

| BCI® Joist Series | Depth [inches] | Weight [plf] | Moment [ft-lbs] | EI x 10 ⁶ [lb-in ²] | K x 10 ⁶ [lbs] | Shear [lbs] | End Reaction [lbs] | | | | Intermediate Reaction [lbs] | | | |
|-------------------|----------------|--------------|-----------------|--|---------------------------|-------------|----------------------|-------------------|----------------------|-------------------|-----------------------------|-------------------|----------------------|-------------------|
| | | | | | | | 1¼" Bearing | | 3½" Bearing | | 3½" Bearing | | 5¼" Bearing | |
| | | | | | | | No WS ⁽¹⁾ | WS ⁽²⁾ | No WS ⁽¹⁾ | WS ⁽²⁾ | No WS ⁽¹⁾ | WS ⁽²⁾ | No WS ⁽¹⁾ | WS ⁽²⁾ |
| 5000s 1.8 | 9½ | 2.3 | 2725 | 175 | 5 | 1475 | 950 | 1125 | 1125 | 1275 | 2100 | 2350 | 2525 | 2750 |
| | 11⅞ | 2.6 | 3485 | 295 | 6 | 1625 | 950 | 1425 | 1425 | 1475 | 2250 | 2850 | 2525 | 3000 |
| | 14 | 2.9 | 4130 | 430 | 8 | 1825 | 950 | 1525 | 1475 | 1725 | 2350 | 3050 | 2525 | 3200 |
| 6000s 1.8 | 9½ | 2.5 | 3165 | 200 | 5 | 1575 | 1175 | 1375 | 1375 | 1425 | 2400 | 2650 | 2700 | 2750 |
| | 11⅞ | 2.8 | 4060 | 335 | 6 | 1675 | 1175 | 1425 | 1425 | 1475 | 2500 | 2850 | 2900 | 3000 |
| | 14 | 3.1 | 4815 | 490 | 8 | 1925 | 1175 | 1525 | 1525 | 1725 | 2600 | 3150 | 2925 | 3200 |
| | 16 | 3.4 | 5495 | 660 | 9 | 2175 | 1175 | 1625 | 1550 | 1975 | 2650 | 3350 | 2950 | 3350 |
| 6500s 1.8 | 9½ | 2.7 | 3505 | 220 | 5 | 1575 | 1175 | 1375 | 1375 | 1425 | 2400 | 2650 | 2700 | 2750 |
| | 11⅞ | 3.0 | 4495 | 365 | 7 | 1675 | 1175 | 1425 | 1425 | 1475 | 2500 | 2850 | 2900 | 3000 |
| | 14 | 3.3 | 5330 | 535 | 8 | 1925 | 1175 | 1525 | 1525 | 1725 | 2600 | 3150 | 2925 | 3200 |
| | 16 | 3.5 | 6085 | 720 | 9 | 2175 | 1175 | 1625 | 1550 | 1975 | 2650 | 3350 | 2950 | 3350 |
| 60s 2.0 | 11⅞ | 3.2 | 6235 | 450 | 7 | 1825 | 1225 | 1475 | 1500 | 1650 | 2900 | 3000 | 3550 | 3650 |
| | 14 | 3.5 | 7440 | 660 | 8 | 1925 | 1250 | 1625 | 1650 | 1850 | 2925 | 3550 | 3600 | 3700 |
| | 16 | 3.8 | 8520 | 895 | 9 | 2175 | 1450 | 1650 | 1750 | 2150 | 2950 | 3700 | 3650 | 4000 |
| 90s 2.0 | 11⅞ | 4.3 | 9550 | 675 | 7 | 2175 | 1425 | 1875 | 1900 | 1950 | 3375 | 3850 | 4000 | 4350 |
| | 14 | 4.6 | 11390 | 980 | 8 | 2350 | 1450 | 1950 | 1950 | 2150 | 3400 | 3850 | 4100 | 4450 |
| | 16 | 4.9 | 13050 | 1330 | 9 | 2550 | 1475 | 2150 | 2000 | 2350 | 3425 | 4000 | 4200 | 4650 |

NOTES:

- (1) No web stiffeners required.
- (2) Web stiffeners required.
- (3) Not applicable, web stiffeners required.
- Moment, shear and reaction values based upon a load duration of 100% and may be adjusted for other load durations.
- Design values listed are applicable for Allowable Stress Design (ASD).

$$\Delta = \frac{5wl^4}{384EI} + \frac{wl^2}{K}$$

Δ = deflection [in]
 w = uniform load [lb/in]
 l = clear span [in]
 EI = bending stiffness [lb-in²]
 K = shear deformation coefficient [lb]

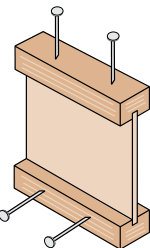
BUILDING CODE EVALUATION REPORT

- ICC ESR 1336 (IBC, IRC)

BCI® Closest Allowable Nail Spacing

Nailing Perpendicular to Glue Lines (Wide Face)

Nailing Parallel to Glue Lines (Narrow Face)



| Nail Size | All BCI® Joists | | | |
|------------------|--|-----------------------|---|-----------------------|
| | Nailing Perpendicular to Glue Line (Wide Face) | | Nailing Parallel to Glue Line (Narrow Face) | |
| | O.C. Spacing [inches] | End of Joist [inches] | O.C. Spacing [inches] | End of Joist [inches] |
| 8d Box | 2 | 1½ | 4 | 1½ |
| 8d Common | 2 | 1½ | 4 | 3 |
| 10d & 12d Box | 2 | 1½ | 4 | 3 |
| 16d Box | 2 | 1½ | 4 | 3 |
| 10d & 12d Common | 3 | 2 | 6 | 4 |
| 16d Sinkers | 3 | 2 | 6 | 4 |
| 16d Common | 3 | 2 | 6 | 4 |

- If more than one row of nails is used, the rows must be offset at least ½ inch.
- Simpson Strong-Tie A35 connectors may be attached to the side of BCI® 60s & 90s joist flanges only. Use nails as specified by Simpson Strong-Tie; do not attach connectors on both sides of a flange at the same location.

BCI® Diaphragm Table ⁽¹⁾

| BCI® Series | Diaphragm Capacity ⁽²⁾⁽³⁾ [lb/ft] | |
|--------------|--|--|
| | Unblocked | Blocked |
| 5000s | As permitted for 2x framing in building code | 320 lb/ft for 6" o.c. nailing @ panel edges 425 lb/ft for 4" o.c. nailing, staggered, @ panel edges |
| 6000s, 6500s | As permitted for 3x framing in building code | 360 lb/ft for 6" o.c. nailing @ panel edges 480 lb/ft for 4" o.c. nailing, staggered @ panel edges |
| 60s, 90s | As permitted for 3x framing in building code | As permitted for 3x framing in building code with nail spacing no closer than 3" o.c. |

NOTES:

- (1) See table 6 of ICC ESR 1336.
- (2) BCI joists may be substituted for solid sawn framing in horizontal wood diaphragms as shown in Table 2306.3.1 of the IBC or Table 23-II-H of the UBC.
- (3) Diaphragm nailing shall not exceed BCI closest allowable nail spacing limits.