BEARING LENGTH REQUIREMENTS

RIGIDLAM LVL BEARING LENGTH REQUIREMENTS

Support Material		S-P-F (South) Hem-Fir (North)[5]		Hem-Fir S-P-F[5]		Southern Pine Douglas Fir – Larch[5]		1.8E RIGIDLAM[6]		2.0E RIGIDLAM[6]	
Fc⊥ (psi)		335		405		565		700		750	
RIGIDLAM Beam Width (in)		1¾″	3½″	1¾″	3½″	1¾″	3½″	1¾″	3½″	1¾″	3½″
Reaction (x 1000 lbs)	1	3″	1½″	1½″	1½″	1½″	1½″	1½″	1½″	1½″	1½″
	2	3½″	3″	3″	1½″	3″	1½″	1¾″	1½″	1½″	1½″
	3	5½″	3″	4½″	3″	3½″	3″	2½″	1½″	2¼″	1½″
	4	7¼″	3½″	6″	3″	4½″	3″	3¼″	1¾″	3″	1½″
	5	9¼″	4½″	7¼″	4½″	5½″	3″	4″	2″	4″	2″
	6		5½″	9¼″	4½″	7¼″	3½″	5″	2½″	4¾″	2¼″
	7		6″		5½″	7¼″	4½″	5¾″	3″	5½″	2¾″
	8		7¼″		6″	9¼″	4½″	6½″	3¼″	6″	3″
	9		9¼″		7¼″	9¼″	5½″	7½″	3¾″	7″	3½″
	10		9¼″		7¼″		5½″	8¼″	4″	7¾″	4″
	11				9¼″		6″	9″	4½″	8½″	4¼″
	12				9¼″		7¼″		5″	9¼″	4¾″
	13				9¼″		7¼″		5½″		5″
	14						7¼″		5¾″		5½″
	15						9¼″		6¼″		5¾″
	16						9¼″		6½″		6″
	17						9¼″		7″		6½″
	18						9¼″		7½″		7″
	19								7¾″		7¼″
	20								8¼″″		7¾″
	21								8¾″		8″
	22								9″		8½″
	23										8¾″

Notes:

1. The minimum required bearing length is 1½″.
2. Duration of load factors may not be applied to bearing length requirements.
3. All beams require support across their full width.
4. All beams require lateral support at bearing points.
5. Use these values when the beam is supported by a wall plate, sill plate, timber or built-up girder.
6. Use these values when the beam is supported by the end of a column or connection hardware.
7. The support member must be sized to carry the load from the beam.

FASTENING RECOMMENDATIONS FOR SIDE-LOADED, MULTIPLE-PIECE MEMBERS FOR 1.8E & 2.0E RIGIDLAM LVL

MAXIMUM UNIFORM LOAD APPLIED TO EITHER OUTSIDE PIECE – POUNDS PER LINEAL FOOT

Pieces In Member	Nailed		Bolted		
	2 rows 16d common at 12″ o. c.	3 rows 16d common at 12″ o. c.	2 rows ½″ bolts at 24″ o. c.	2 rows ½″ bolts at 12″ o. c.	3 rows ½″ bolts at 12″ o. c.
2 – 1¾″	505	760	510	1015	1520
3 – 1¾″	380	570	380	760	1140
4 – 1¾″	use bolts		340	680	1015
2 – 3½″	use bolts		860	1720	2580

- Use RFP-KeyBeam™ sizing software or beam, header or load tables to size the beam.
- The table values apply to common bolts that conform to ANSI/ASME Standard B18.2.1-1981. Bolt holes must be centered at least two inches from the top and bottom edges of the beam. Bolt holes must be the same diameter as the bolts. Washers must be used under the bolt heads and nuts. Offset or stagger rows of bolt holes by one-half of the bolt spacing.
- The specified nailing applies to both sides of a three-piece beam.
- 7 inch wide beams may not be loaded from one side only. They must be loaded from both sides and/or top-loaded.
- The table values for nails may be doubled for 6″ o. c. spacing and tripled for 4″ o. c. spacing.
- Duration of load factors (e.g. 115%, 125%) may be applied to the table values.

RECOMMENDED FASTENER DESIGN INFORMATION IN TERMS OF EQUIVALENT SPECIFIC GRAVITY FOR HEADER GRADE 1.8E AND 2.0E RIGIDLAM LVL

	Face	Edge
Withdrawal	0.50	0.50
Dowel Bearing-nail	0.50	0.50
Dowel Bearing-bolt	0.50	Not applicable