

VMG LIGNUM LVL

GRADE 1.4E
SCARF CUT TABLES



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SCARF CUT NOTES

1. Maximum allowable reactions are based on floor load duration, $C_d=1.0$.
2. Minimum heel height is measured at the exterior of the bearing and assumes the maximum notch at the inside face of the bearing is 25% of the gross depth.
3. Tabulated maximum allowable reactions consider LVL shear and bearing compression perpendicular to grain. For bearing on wood plates, reactions shall be limited to wood plate compression perpendicular to grain.

HOW TO USE THE SCARF CUT TABLES

1. Compute the allowable stress design reaction for the beam.
2. Compare the calculated reaction to the tabulated allowable reaction.
3. For multi-ply beams, the allowable reactions may be multiplied by the number of beam plies.

Maximum Allowable Reaction for Scarf Cuts (lbf)

Beam Depth (in)	5.500	7.250	9.250	9.500	11.250	11.875	14.000	16.000	18.000
Slope Range	1.5" 1.4E LVL, 3" to < 5.25" Bearing								
3:12 to < 9:12	1031	1359	1734	1781	2109	2227	2475	2475	2475
9:12 to 12:12	1222	1611	2056	2111	2475	2475	2475	2475	2475
Slope Range	1.75" 1.4E LVL, 3" to < 5.25" Bearing								
3:12 to < 9:12	1203	1586	2023	2078	2461	2598	2888	2888	2888
9:12 to 12:12	1426	1880	2398	2463	2888	2888	2888	2888	2888
Slope Range	1.5" 1.4E LVL, ≤ 5.25" Bearing								
3:12 to < 9:12	1031	1359	1734	1781	2109	2227	2625	3000	3375
9:12 to 12:12	1222	1611	2056	2111	2500	2639	3111	3556	4000
Slope Range	1.75" 1.4E LVL, ≤ 5.25" Bearing								
3:12 to < 9:12	1203	1586	2023	2078	2461	2598	3063	3500	3938
9:12 to 12:12	1426	1880	2398	2463	2917	3079	3630	4148	4667

Minimum Heel Height For Scarf Cuts (in)

Beam Depth (in)	5.500	7.250	9.250	9.500	11.250	11.875	14.000	16.000	18.000
Bearing Range	1.5" and 1.75" 1.4E LVL, Slope 3:12 to < 9:12								
3" to < 5.25"	3.375	4.688	6.188	6.375	7.688	8.156	9.750	11.250	12.750
5.25" or more	2.813	4.125	5.625	5.813	7.125	7.594	9.188	10.688	12.188
Bearing Range	1.5" and 1.75" 1.4E LVL, Slope 9:12 to < 12:12								
3" to < 5.25"	1.875	3.188	4.688	4.875	6.188	6.656	8.250	9.750	11.250
5.25" or more	0.188	1.500	3.000	3.188	4.500	4.969	6.563	8.063	9.563