

Nail Lamination - 2-Ply & 3-Ply Members

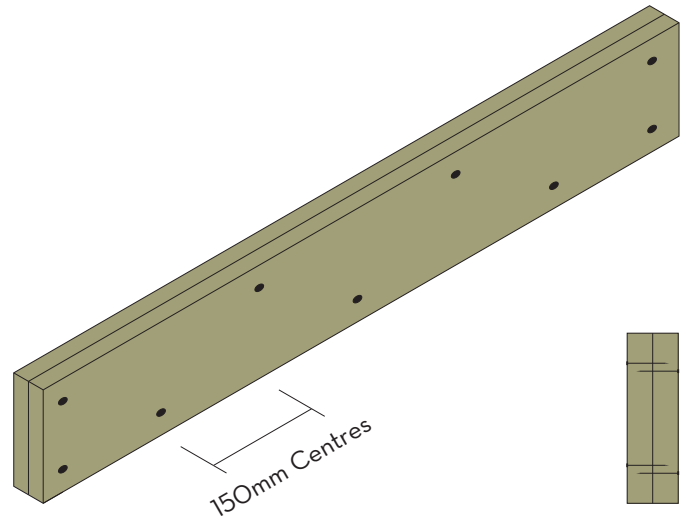
Minimum Nail Sizes

45mm Members - 2.80x75mm

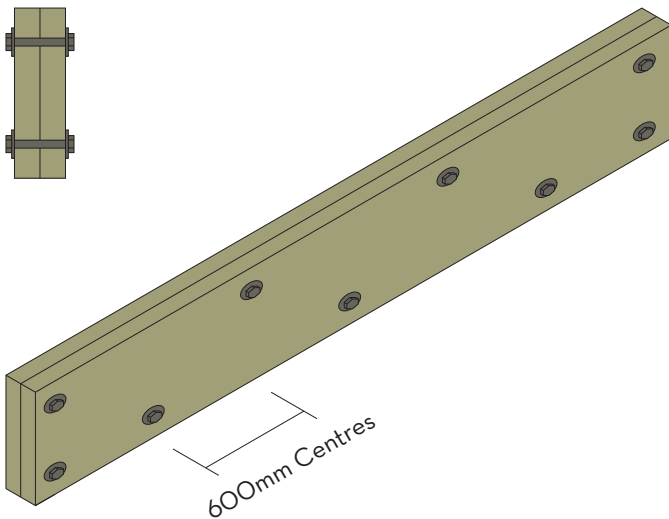
63mm Members - 2.80x100mm

NAIL LAMINATION NOTES:

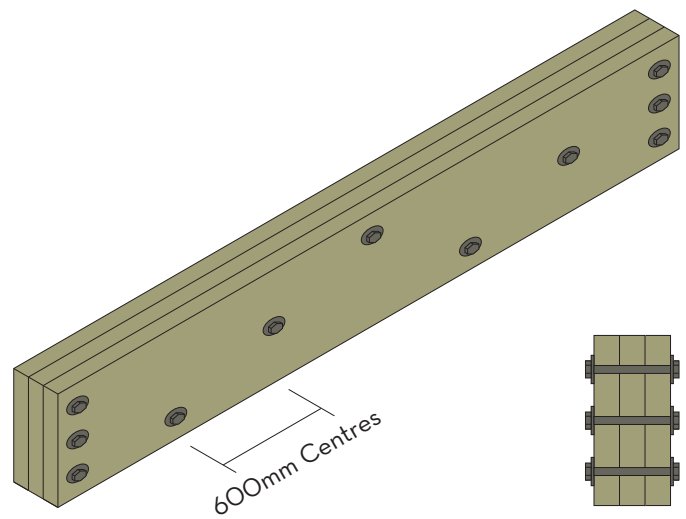
1. Minimum 2 Rows for Depths up to 305mm
2. Minimum 3 Rows for Depths up to 450mm
3. Drive opposing nail pattern to opposite side of member
4. Nails to penetrate second member by at least 50%
5. First nails to be located approx. 135mm from the edge
6. Additional nails added under point loads and over supports
7. Repeat nailing to nailing pattern to each lamination



Bolt Lamination - 2-Ply Member - M12 Bolts



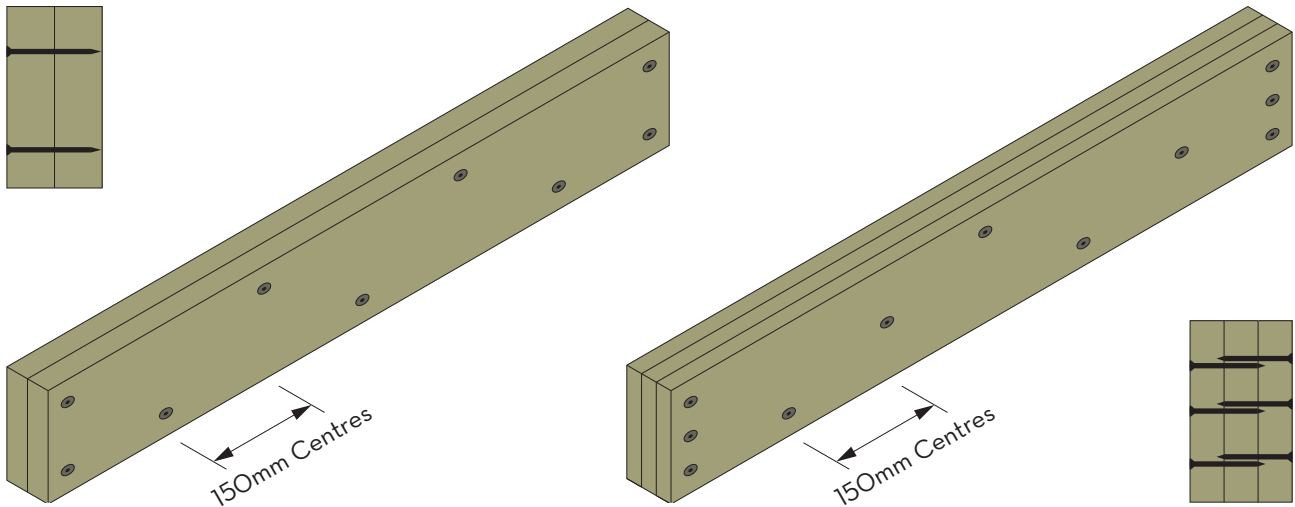
Bolt Lamination - 3-Ply Member - M12 Bolts



BOLT LAMINATION NOTES:

1. M12 (8.8/S) bolts with 55mm washers at 600mm centres staggered in 2 rows for double laminated beams
2. M12 (8.8/S) bolts with 55mm washers at 600mm centres staggered in 3 rows for triple laminated beams
3. Minimum 60mm edge clearance required
4. Ensure pre-camber of Glulam Beams in set in the upward direction
5. Apply an additional 2, or 3 M12 bolts directly under any point points
6. Bolt members together prior to applying loads

Screw Lamination of 2 & 3 Ply Members



2 Ply Lamination			3 Ply Lamination			
Configuration		Screw Length	Configuration			Screw Length
36mm	36mm	Not Permitted	36mm	36mm	36mm	Not Permitted
45mm	45mm	Not Permitted	45mm	45mm	45mm	100mm
63mm	45mm	100mm ⁽¹⁾	63mm	45mm	45mm	100mm ⁽²⁾
63mm	63mm	125mm	63mm	63mm	63mm	125mm

⁽¹⁾ Screws to be driven through the face of the 45mm member

⁽²⁾ 63mm member to be positioned in the centre. Screws driven from either side through the face of 45mm members

SCREW LAMINATION NOTES:

1. Detail applicable to a 14g Bugle Head Batten Screw
2. Not acceptable for 36mm members in any configuration or 2 ply 45mm members
3. Drive opposing screw pattern to opposite side of member for 3 ply configurations
4. Not acceptable for members less than 200mm in depth
5. 2 Rows for 2 ply configurations
6. 3 Rows for 3 ply configurations
7. Refer to table for minimum edge and end distance requirements
8. Minimum of 45mm embedment into second member required
9. Suitable for both face and top loaded members

Minimum Distances - 14g Screws	
End	65mm
Edge	35mm
Between	65mm

We recommend:

BLACKHAWK™
 FASTENERS 