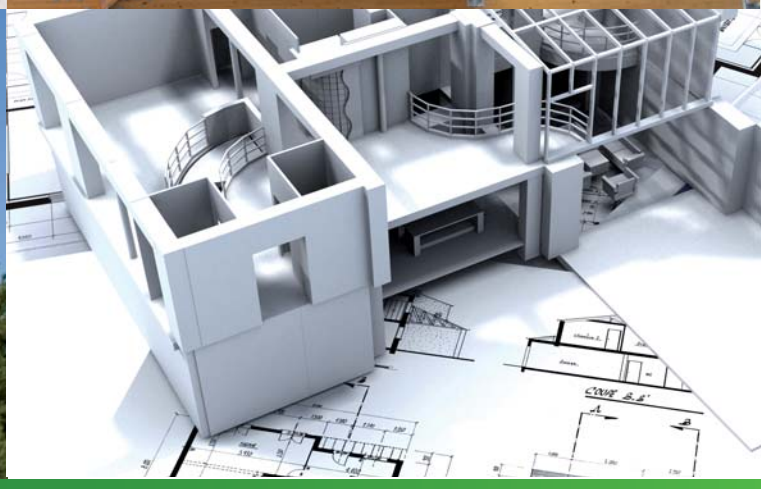
SmartLam GL17 Design Guide



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Edition 1 2011

SCOPE OF THIS PUBLICATION

This Design Guide and load Tables assist in the selection of SmartLam GL17 beams for most of the common structural arrangements met in sheet construction.

Methods of developing lateral restraint and providing adequate support, adequate anchorage against wind uplift, and overall structural stability are outside the scope of this publication.

Information on the above matters can be obtained from AS 1684 Residential timber-framed construction or from a structural engineer experienced in timber construction.

Tilling Timber Pty Ltd have structural engineers within the SmartFrame Design Centre who can be contacted for advice on matters concerning the use of its SmartFrame engineered timber products in timber construction via the SmartData Customer HelpLine on 1300 668 690 or e-mail at smartdata@tilling.com

SUBSTITUTION OF OTHER PRODUCTS

All load tables in this document are designed using the characteristic properties of GL17 defined in table 7.1 of AS 1720.1, manufactured to AS/NZS 1328 by quality producers and distributed by Tilling Timber Pty Ltd.

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CERTIFICATION

As a professional engineer, qualified and experienced in timber engineering, I certify that the use of the SmartLam GL17 members as shown in these tables, and installed in accordance with the provisions of this Design Guide, complies to the Building Code of Australia. These span tables have been prepared in accordance with standard engineering principles, the relevant test reports and Australian standards, ie:

- AS 1684.1 Residential timber-framed construction
- AS 1170.1 Structural Design Actions – Permanent Imposed and other actions
- AS 1720.1 Timber Structures - Design Methods
- AS 4055 Wind loads for Houses
- AS/NZS 4063 Characterization of structural timber
- AS/NZS 1328 Glue Laminated Structural Timber - Performance requirements and Minimum production requirements.
- GLTAA Unified Design Criteria

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SmartFrame Product Warranty*

Tilling Timber warrants that its SmartFrame Engineered Wood products will be free from manufacturing defects in workmanship and material.

In addition, provided the product is correctly installed and used, Tilling Timber warrants the adequacy of its design for the normal and expected life of the structure.

This warranty is backed by the full resources of Tilling Timber and by underwritten product liability insurance.

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INTRODUCTION

THE PRODUCT

SmartLam GL17 beams are manufactured to AS/NZS 1328 by quality Glulam manufacturers. SmartLam GL17 Glulam beams are engineered timber products with high strength, dimensional stability, great load carrying capacity, superior fire resistance, and are manufactured from select quality Pine timber.

All timber used for laminating is carefully selected from production and graded according to specification. After trimming to the desired size, all stock is kiln dried to 12% average moisture content, to ensure efficient bonding in the gluing operations. The laminations are finger jointed by machine, with glue being cured by cold press system and controlled temperature.

SmartLam GL17 are available in A, B & C appearance Grades and are pre-cambered to a radius of 600 metres. **Uncambered SmartLam GL17 beams are available to order.**

BENEFITS OF SmartLam GL17

COST EFFECTIVENESS - SmartLam GL17 beams high strength to weight ratio allows you to design for maximum loads over large spans with the smallest possible end sections.

PRODUCT QUALITY - All SmartLam GL17 beams are manufactures in accordance with AS 1328 Glue Laminated Structural Timber and the Glued Laminated Timber Association (GLTAA) Industry standard GLTAA-4-91.

FIRE SAFETY - Extensive fire test data shows that large end section timber performs well in fire situations due to the formation of a protective layer of char which usually occurs at a temperature around 250° C. This charred area inhibits the effects of the fire on the inner portion of the timber component, hence it maintains structural load support for measurable periods of time as the fire progresses.

Conversely, steel loses its strength rapidly as the temperature is raised. At about 550°C, it has lost about 50% of its original bending strength, and by 750°C it has lost 90% Timber does not loose strength in the same way, with the loss of section size through charring the major reason for any strength reduction.

FAST EASY ERECTION - Timber is a user friendly building material, requiring no special tools other than those a normal builder would use, and with SmartLam GL17 beams, installation is fast, easy and efficient.

ENVIRONMENTAL RESPONSIBILITY - SmartLam GL17 beams are made from timber from sustainable managed forests, a natural resource that is friendly to the environment.

LOW MAINTENANCE - In most applications, SmartLam GL17 beams will require little or no maintenance other than that which you would ordinarily carry out to any structural material.

NATURAL BEAUTY - The natural beauty of timber is desired and highly appropriate in many architectural applications. Appearance Grade A & B SmartLam GL17 beams allow you to build timber's natural warmth and beauty into your designs.

TECHNICAL DATA

DESIGN CRITERIA

Deflection limits

The deflection limits applied in these tables are as stated in Table 1 and are in accordance the Glued Laminated Timber Association of Australia (GLTAA) Unified Design Criteria

Table 1: Deflection limits

MEMBER	LONG TERM		SHORT TERM	
	J_2 x D.L	J_2 x (DL+ 0.6 KPa)	L.L	SERVICEABILITY W.L
BEARERS (Floor loads only)		SPAN / 300 or 15 mm	SPAN / 360 or 18 mm	
BEARERS (with roof loads)		SPAN / 300 or 15 mm	SPAN / 360 or 18 mm	SPAN / 250 or 9 mm
JOISTS		SPAN / 300 or 15 mm	SPAN / 360 or 9 mm	
LINTELS (with roof loads only)	SPAN / 300 or 9 m		SPAN / 250 or 9 mm	SPAN / 250 or 9 mm
LINTELS (with roof and floor)		SPAN / 300 or 10 mm	SPAN / 250 or 9 mm	SPAN / 250 or 9 mm
STRUTTING, HANGING, COUNTER BEAMS	SPAN / 300 or 15 mm		SPAN / 270 or 15 mm	SPAN / 150
HANGING/STRUTTING, COUNTER/ STRUTTING	SPAN / 300 or 12 mm		SPAN / 300 or 12 mm	SPAN / 150
ROOF BEAMS, RAFTERS, HIPS	SPAN / 300 or 20 mm		SPAN / 250	SPAN / 150
PATIO & VERANDAH BEAMS	SPAN / 400 or 10 mm		SPAN / 250 or 12 mm	SPAN / 200

For Long Term - Camber may in some circumstances be added to deflection limits
WHERE: DL = DEAD LOAD, LL = LIVE LOAD, WL = WIND LOAD, J_2 = FACTOR FOR DURATION OF LOAD

Design Loads

Table 4

Dead loads are:

Sheet roof without ceiling	20 kg/m^2
Sheet roof with ceiling	40 kg/m^2
Fibro roof with ceiling	60 kg/m^2
Tiled roof without ceiling	60 kg/m^2
Tiled roof with ceiling	75 kg/m^2
Timber floor with ceiling under	40 kg/m^2

Live loads are:

roof (non trafficable) = 0.25 kPa minimum (1.8/area + 0.12) kPa or 0.25 KPa maximum.	
Floor loads (domestic)	1.5 kPa
External - greater than 1 m above ground	2.0 kPa
- Less than 1 m above ground	1.5 kPa

Duration of load/service class

Table 5

Duration of load factor (J_2)

	Service class / exposure classification		
	1, 2	3	Severe/Adverse
Duration			
Short term <= 1 day	1.0	1.0	1.0
Long term > 12 months	1.5	2.0	3.0*

Notes:

1. Any beams to be used in service Class 3 are outside the scope of these span tables, therefore specialist design advice should be sought from an engineer. In general, the size of this beam can conservatively be obtained by the following method:
   (a) Obtain the beam size for service class 1 & 2
   (b) Obtain the EI_{xx} from the "Section Properties" table for this beam
   (c) Obtain from the "Section Properties" table a beam size with an EI_{xx} => 2/1.5 x EI_{xx} of the original beam
   (d) Follow the recommendations of the GLTAA Technical Data sheet No 2: Glulam in weather exposed applications"
   * indicates severe / adverse conditions which are beyond the scope of these span tables and specialist design advice from a engineer should be sought.
2. Service classes 1,2 & 3 are defined in AS1328

ENGINEERING PROPERTIES

Table 6

	Characteristic strengths (MPa)				Elastic moduli (MPa)	
Glulam grade	Bending (F'_b)	Tension parallel to grain (F'_t)	Shear in beam (F'_s)	Compression parallel to grain (F'_c)	Short duration modulus of Elasticity parallel to the grain (E)	Short duration modulus of Rigidity for beams (G)
SmartLam GL17	40	20	4.2	33	16700	1100

CAPACITY FACTORS (Φ) FOR USE WITH SmartLam GL17:

The capacity factor Φ for calculating the design capacity for a structural member depends upon the type of structural material and the application of the member as described in table 2.1 of AS 1720.1. SmartLam GL17 used as a structural element in structures presenting a low degree of hazard to life and other property in case of failure (includes houses) has a capacity factor Φ of 0.95. For other structural applications including beams within houses that support an area greater than 25 m^2, the values of Φ should be obtained from Table 2.1 of AS 1720.1. All the tables within this document have been prepared with the value of Φ = 0.95

OTHER PROPERTIES :

Strength group	SD5
Joint group	JD4
Density	~ 650 kg/m^3
Service class	2 (EMC not to exceed 20% in service)

DIMENSIONAL TOLERANCES:

Height or Width	<100	+2 mm, -2 mm
	100<300	+3 mm, -3 mm
	300<600	+4 mm, -4 mm
	>600	+6 mm, -6 mm

ADHESIVE:

Waterproof resins to include resorcinol, phenol/resorcinol' and polyphenolics

CURING:

Cold press system and controlled temperature

LENGTH:

Stock beams up to 12 m

PRE-CAMBER:

All stock SmartLam GL17 beams are supplied with a built in camber of a radius of 600 metres. SmartLam GL17 beams can be ordered either straight or with or a user specified pre-camber. (see ordering SmartLam GL17)

BEAM PROPERTIES

Table 6 - Section Properties for SmartLam GL17 - Glued Laminated Beams

SmartLam GL 17 Beam properties

Nominal size DxB mm	Beam mass kg/m	Nominal section area 10^3 mm^2	Major axis			Minor axis	
			Z_{xx} 10^3 mm^2	I_{xx} 10^6 mm^4	EI_{xx} 10^9 Nmm^2	Z_{yy} 10^3 mm^2	I_{yy} 10^6 mm^4
130 x 65	5.5	8.5	183	12	199	91.5	3.0
165 x 65	7.0	10.7	295	24	406	116.2	3.8
195 x 65	8.2	12.7	412	40	671	137.3	4.5
230 x 65	9.7	15.0	573	66	1101	162.0	5.3
260 x 65	11.0	16.9	732	95	1590	183.1	6.0
295 x 65	12.5	19.2	943	139	2322	207.7	6.8
300 x 65	12.7	19.5	975	146	2442	211.3	6.9
330 x 65	13.9	21.5	1180	195	3251	232.4	7.6
360 x 65	15.2	23.4	1404	253	4220	253.5	8.2
395 x 65	16.7	25.7	1690	334	5575	278.1	9.0
425 x 65	18.0	27.6	1957	416	6944	299.3	9.7
130 x 85	7.2	11.1	239	16	260	156.5	6.7
165 x 85	9.1	14.0	386	32	531	198.7	8.4
195 x 85	10.8	16.6	539	53	877	234.8	10.0
230 x 85	12.7	19.6	749	86	1439	277.0	11.8
295 x 85	16.3	25.1	1233	182	3037	355.2	15.1
330 x 85	18.2	28.1	1543	255	4251	397.4	16.9
360 x 85	19.9	30.6	1836	330	5519	433.5	18.4
395 x 85	21.8	33.6	2210	437	7290	475.6	20.2
425 x 85	23.5	36.1	2559	544	9081	511.8	21.8
460 x 85	25.4	39.1	2998	689	11514	553.9	23.5
495 x 85	27.3	42.1	3471	859	14347	596.1	25.3
525 x 85	29.0	44.6	3905	1025	17117	632.2	26.9
560 x 85	30.9	47.6	4443	1244	20774	674.3	28.7
590 x 85	32.6	50.2	4931	1455	24295	710.5	30.2

Pre - Camber in mm based upon Camber Radius of 600 metres.

Table 8

CAMBER BASED UPON 600 m RADIUS

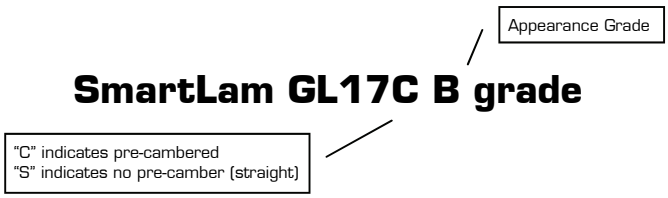
Beam length (m)	Camber (mm)	Beam length (m)	Camber (mm)	Beam length (m)	Camber (mm)
3.3	2.2	6.3	8.3	9.3	18.0
3.6	2.7	6.6	9.1	9.6	19.2
3.9	3.1	6.9	9.9	9.9	20.4
4.2	3.7	7.2	10.8	10.2	21.6
4.5	4.2	7.5	11.7	10.5	23.0
4.8	4.8	7.8	12.7	10.8	24.3
5.1	5.4	8.1	13.7	11.1	25.7
5.4	6.0	8.4	14.7	11.4	27.0
5.7	6.8	8.7	15.7	11.7	29.0
6.0	7.5	9.0	16.9	12.0	30.0

ORDERING SmartLam GL17

SmartLam GL17 glulam can be purchased with or without camber and in different appearance grades.

AS/NZS 1328.2 defines 3 appearance grades:

- Appearance Grade A - Sanded with any voids filled - intended for applications where appearance is important and clear or painted finishes are used
- Appearance Grade B - intended for applications where appearance is important but where a planed finish is acceptable
- Appearance Grade C - intended for applications where appearance is unimportant



Stock SmartLam GL17 will be supplied pre-cambered in B grade finish unless otherwise specifically requested.

PROTECTION AND HANDLING

All beams are wrapped at the factory to protect against weather and handling during storage and transport. Care should be taken during delivery to avoid marking and to avoid damage. Unloading of trucks should be done by hand or with a crane, do not drop or dump members. During unloading with lifting equipment, use fabric or plastic belts or other slings which will not mark the wood. If chains or cables are used, provide protective blocking or padding. Guard against soiling, dirt, footprints, abrasions, or injury to sharp edges or corners.

INSTALLATION

PREPARATORY WORK

Carefully unload and handle the laminated members at job site to prevent surface marking and damage. If laminated timber is to be stored before erection, place it on blocks well off the ground with individual members separated by strips so that air may circulate around all four sides. The top and the sides of storage pile shall be covered with moisture resistant covering. Wrapping shall be left intact, but individual wrappings shall be slit or punctured on the lower side to permit the drainage of water that may have accumulated. Before erection, the assembly should be checked for any damage from water or handling, prescribed camber, and accuracy of anchorage connections.

Laminated beams can be nailed into place in the same way as solid timber beams. Alternatively, a range of plates are available for end fixing. For larger beams, special purpose, engineer designed end fixing should be used.

DEFLECTION

All structural members deflect downwards when dead loads are applied, and therefore it is important to allow for this deflection structurally and/or aesthetically in the selection of the beam sizes. The "Deflection Limits" table on page 1 details deflection limits for various applications.

VERTICALITY

SmartLam GL17 members must not be installed out of plumb more than height/500.

NOTCHES

Large notches and holes in Glulam beams should normally be avoided as they cause abrupt changes in cross section and disrupt the stress flow in the structure. This gives rise to tension perpendicular to the grain and shear stresses around the holes and notches. For this reason, notches seriously reduce the strength of a beam, particularly if located in the tension zone of a beam. Unless specific allowance has been made in the design, no notches shall be made without first obtaining the advice of an engineer. Design rules are set out in AS 1720.1 Timber Engineering Code and should be followed closely when considering notching anywhere in a Glulam beam.

HOLES FOR SERVICES

Horizontal Holes - Like notches, holes in a Glulam beam remove wood fibre, reduce the net area of the beam at the hole location, and introduce stress concentrations. For this reason, horizontal holes in Glulam beams are limited in size and location to maintain the structural integrity of the beam. Figure 2 below shows the zones of a uniformly loaded, simply supported beam where field drilling of holes may be considered.

Field drilled horizontal holes should be for access only and should not be used as attachment points for brackets or other load bearing hardware unless specifically designed as such by the Engineer/Designer.

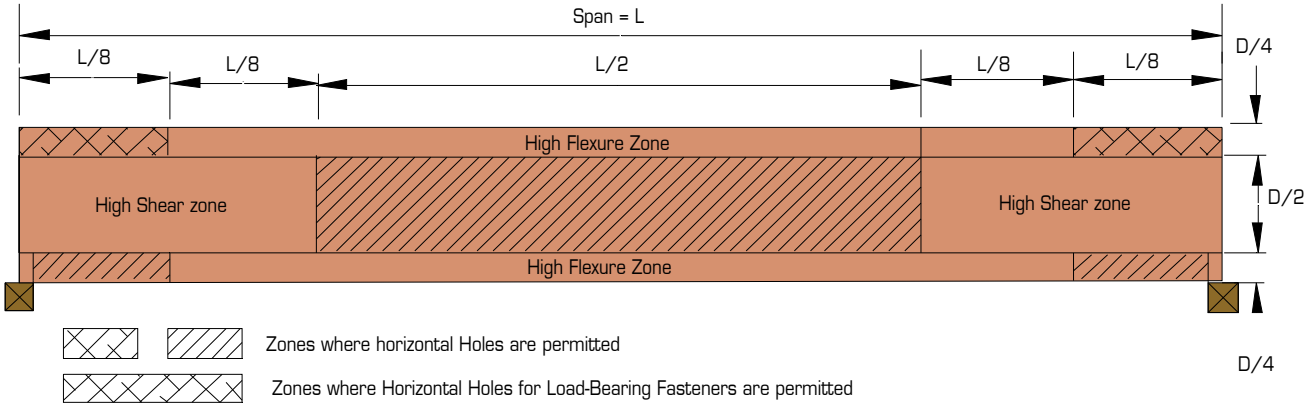
Regardless of the hole location, the net section of the beam remaining should be checked for flexure and horizontal shear.

Vertical holes - As a rule of thumb, vertical holes drilled through the depth of a Glulam beam cause a reduction in capacity at that location directly proportional to the ratio of 1½ times the

diameter of the hole. For example, a 25 mm hole drilled in a 150 mm wide beam would reduce the capacity of the beam at that section by ¼. For this reason, where it is necessary to drill vertical holes through a Glulam member, the holes should be positioned in areas of the member that are stressed to less than 50% of the design in bending.

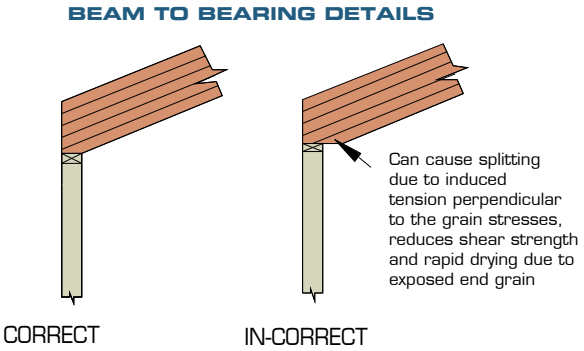
Holes for support of heavy equipment - Heavy equipment or piping suspended from Glulam should be attached so that the load is applied to the top of the member to avoid tension perpendicular to the grain stresses. Any horizontal holes required for support of significant weight, such as suspended heating and cooling units or main water lines, must be located above the neutral axis of the member and in a zone stressed to less than 50% of the design flexural stresses.

Figure 2 - Zones where Horizontal Holes are permitted in a Uniformly Loaded Simply Supported Beam



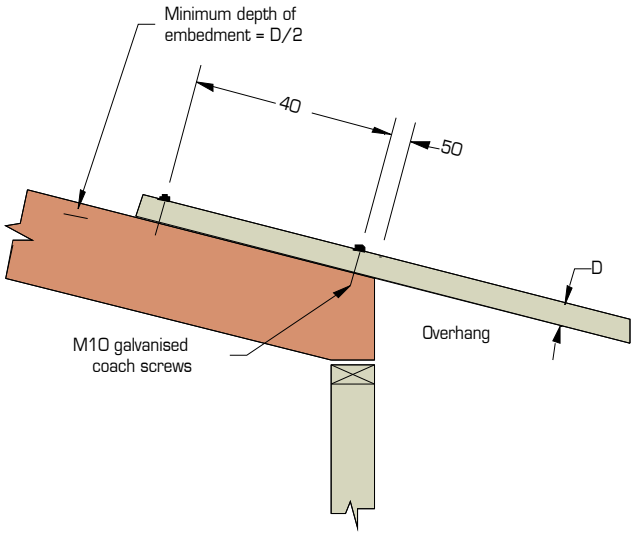
BIRDS MOUTHING

Figure 3 - Birds mouthing details for SmartLam GL17



EAVES OVERHANG

Figure 4 - Eaves over hang details for SmartLam GL17



Note:
Refer to AS 1684 Residential timber-framed construction code for overhang member size.

Allowable Eaves overhangs

1. Non Cyclonic Areas

a. Beams for flat or similar roofs - Not Birds mouthed:

- Eaves overhang shall not exceed 40% of the actual beam span.

b. Beams with conventional pitched roofs - Birds mouthed to one third their depth:

- sheet roof - 20% of actual beam span
- Tiled roof - 30% of actual beam span

2. Cyclonic Areas

Recommendations as per above, but reduced as follows:

Non Birds mouthed - 25% of actual beam span

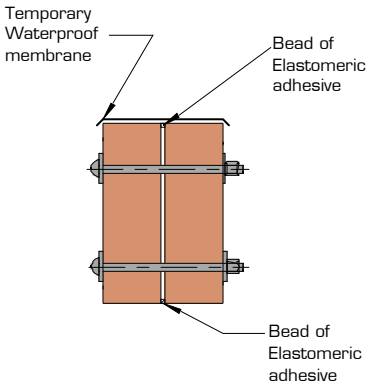
Birds mouthed-

- sheet roof - 10% of actual beam span
- Tiled roof - 20% of actual beam span

MULTIPLE SmartLam GL17 SECTION BEAMS

Vertical laminations may be achieved by adopting the principle described in clause 2.3 of AS 1684, however, due to the thickness of SmartLam GL17, nails are NOT suitable for combining SmartLam GL17 beams.

Experience with Glulam beams indicates that multiple member laminations individual components may cup as a result of the ingress of moisture between laminates during construction. The suggested method of vertical lamination shown below provides a greater level of fixity between individual components, and combined with the use of a temporary waterproof membrane and an elastomeric adhesive prevents moisture penetration between the laminates.



Recommended "during construction" protection from weather for multiple

TOP LOADED BEAMS (Symmetrical loading)

The edges of the individual sections must be carefully aligned to each other so that the composite beam is flat, allowing the applied loads to be equally shared. It is recommended that there be 2 rows of galvanised M12 bolts at 600 mm centres.

SIDE LOADED BEAMS (Non – symmetrical loading)

When a load is applied to one side of a built-up Glulam or an unbalanced load is applied to both sides, the elements of the built up beam shall be attached such that the applied load is distributed equally to all elements. Like the minimum connection shown above, the connection is made with bolts, with the allowable floor load width supported by either outside member shown in the table below.

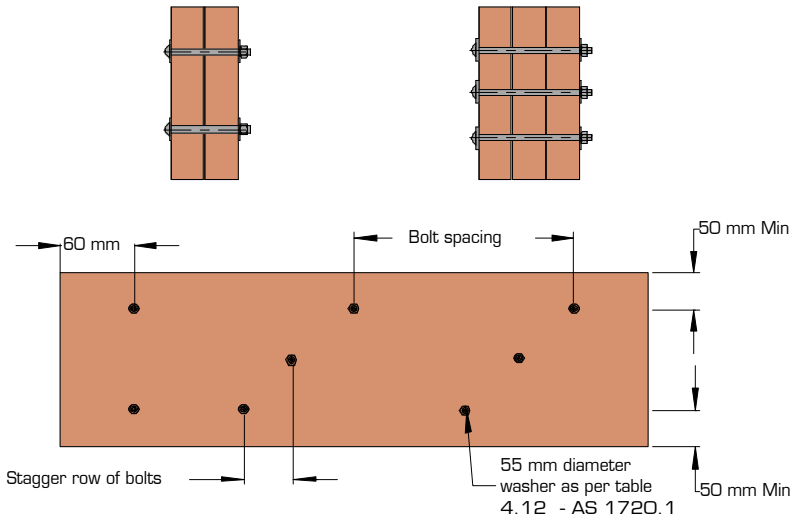
Maximum floor load width supported by either outside member (mm)

Combination (see details below)	12 mm Φ bolts	
	2 rows at 600 ctrs	2 rows at 300 ctrs
Combination 1	7500	15000
Combination 2	5600	11000

Notes:
1. Table values are for 40 kg/m^2 floors.
2. Bolts are to be grade 4.6 commercial bolts conforming to AS 1111. Bolt holes are to be a maximum of 13 mm diameter and are to be located NOT less than 50 mm from either edge.
3. All bolts shall be fitted with a washer at each end, of a size NOT less than that given in AS 1720.1 table 4.12.

Combination 1
2 pieces of
65 or 85 mm

Combination 2
3 pieces of
65 mm

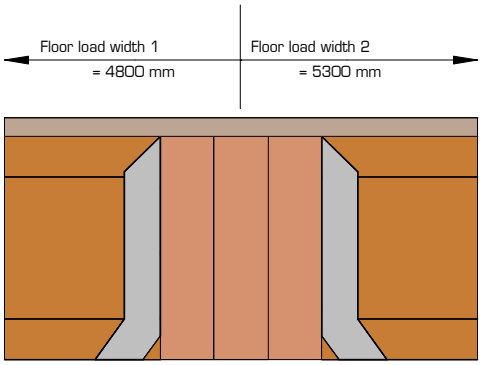


HOW TO USE THE MAXIMUM UNIFORM SIDE LOAD TABLE

Example: see diagram opposite

Beam of 2 SmartLam GL17's loaded on both side (Combination 1)
FLW 1 = 4800 mm, FLW 2 = 5300 mm
Total FLW = 4800 + 5300 = 10100 mm.

1. Use SmartFrame software or these SmartLam GL17 safe load tables to size the two member section to support the FLW of 5100 mm.
2. Choose the larger of the side FLW's carried by the beam, in this case 5300 mm.
3. Enter the table at the "Combination 1" row and scan across to a table value greater than 5300 mm. The first value in the row at 10200 mm is greater than the 5300 mm required.
4. Thus adopt 2 rows of 12 mmΦ x bolts at 600 mm centres



SmartLam GL17 Design /Effective span

Normal structural analysis uses the centreline representation of the member. The term "span" can be defined in a number of ways and these are defined as follows:

Clear span. This is the distance between the faces of any support. It is generally the one easiest to measure and read from the drawings

Nominal span/centre-line span. This is the distance between the centre of the supports. This span is used to determine bending moments and deflections for continuous spaning SmartJoist members

Design span/Effective span. This is the span used for single span members to determine the bending moment, the slenderness of bending members and the deflections. In AS 1720.1, this is the dimension referred to as "L", and is defined below.

Design span/Effective span is the distance between -

- **The centre of the bearing at each end of a beam where the bearing lengths have NOT been conservatively sized**
- **The centre of notional bearing that have been sized appropriately, where the size of the bearing IS conservative.**

Diagram (a) shows beam where bearings have been designed appropriately. The effective span is taken as the distance between the centre of each bearing area

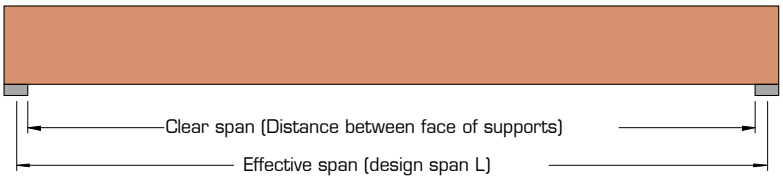
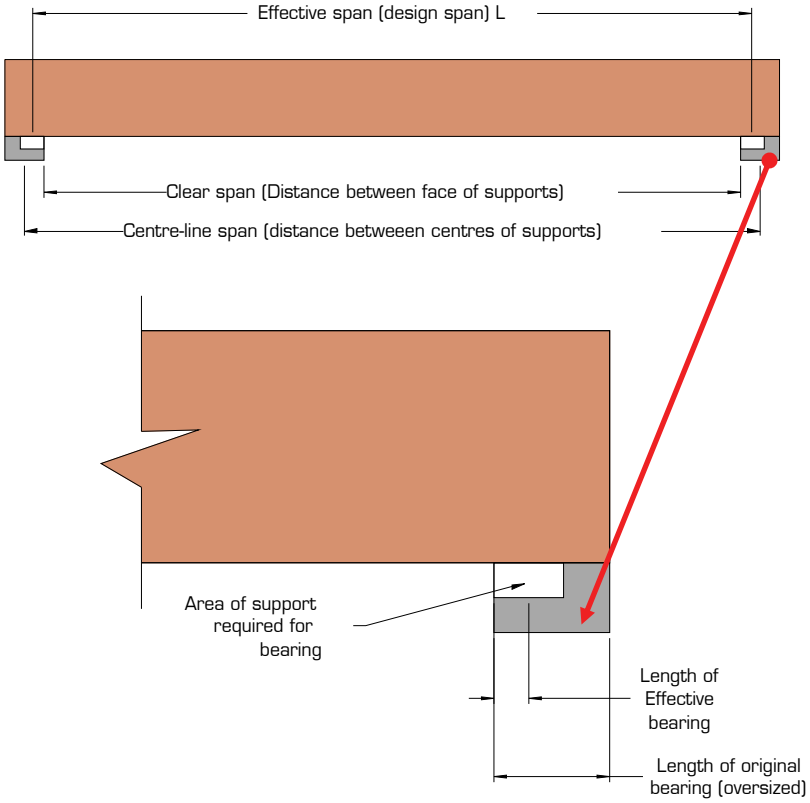


Diagram (b) shows beam where bearings at each end have been oversized. (This is frequently the case for beams that bear onto brickwork or concrete walls where the thickness of the wall is in excess of the area required to give the beam bearing capacity).
To find the correct effective span:

1. Calculate the minimum bearing required to carry the loads satisfactorily
2. Add minimum bearing length to "clear span" distance

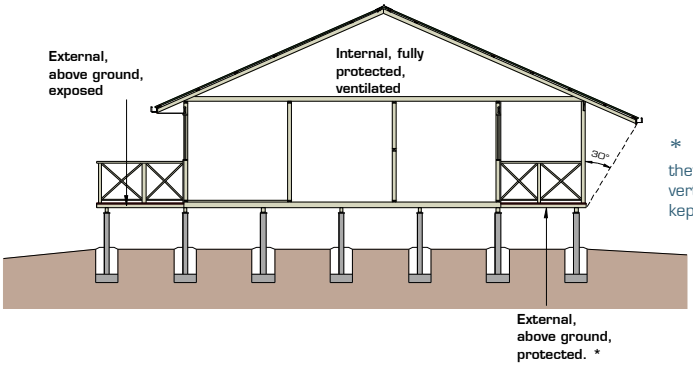


span difference	effective span	resultant span description
10% Max	main span	continuous
10 – 30%	1.1 x main span	continuous
Above 30% difference	main span	single

$$\text{span difference} = \frac{(\text{major span} - \text{minor span})}{(\text{major span} + \text{minor span})} \times 100$$

The span to use in the case of unequal continuous spans is the "resultant span description " as shown in the table above.
(Note: It is recommended for the most accurate designs, that the SmartFrame software be used.)

SmartLam DURABILITY and WEATHER EXPOSURE RECOMMENDATIONS



DEFINITION OF EXPOSURE

* External timbers are regarded as protected in AS 1684 if they are covered by a roof projection (or similar) at 30° to the vertical and they are well detailed and maintained (painted and kept well ventilated).

SmartLam GL's are manufactured from kiln dried timber (MC less than 15%), and therefore need to be protected from moisture cycling that can occur from:

- Exposure to direct sun and rain (including during construction)
- Contact or close exposure with moisture laden porous material (e.g. Concrete blocks)
- Exposure to extreme environments such as dry heating systems (e.g. slow combustion wood heaters), air conditioning, large north or west facing windows or moisture laden environments such as pool enclosures

SmartLam PROTECTION METHODS

1. During Construction

SmartLam GL's are supplied WITHOUT any short term construction sealer. However if SmartLam GL is expected to be exposed for an extended period or become wet, it is recommended that the beam be sealed with a construction sealer that is compatible with the final paint or varnish finish, or wrapped in plastic to provide protection (plastic must allow for drainage and air circulation to breath).

Examples:

i. If the SmartLam GL's is installed inside a building without direct exposure to air-conditioning such as in wall cavity, protection to the beam is not required.
ii. If the SmartLam GL's is installed inside a building with direct exposure to air conditioning or dry heat then a sealer is required.
iii. If the SmartLam GL's is under the eaves and protected from direct rain and sun, it is recommended that the construction sealer be lightly sanded and a finish coat of compatible premium quality paint be applied. (In accordance with paint manufacturer's specifications).
iv. If the SmartLam GL's is exposed to the sun or weather refer to "Exterior Applications" below.

2. Exterior Applications

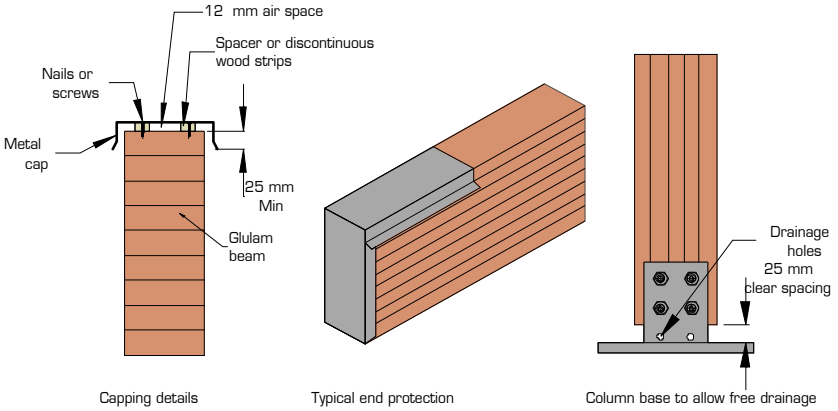
It is **NOT** recommended that ANY SmartLam GL be used in **external above ground exposed** applications. SmartLam GL's used in protected exterior applications must be:

i. H3 treated to AS/NZS 1604.5 (Only Pine SmartLam is suitable for treatment)
ii. Correctly detailed (e.g. End caps, good drainage and ventilation). See "Design & Construction detailing tips" below
iii. Correctly painted with a premium quality protective finish (e.g. light coloured pigmented external paint system) For painting of LOSP treated SmartLam see "PAINTING LOSP TREATED SmartLam BEAMS" below

It is important that an inspection and maintenance programme, based on exposure level and the paint manufacturer's recommendations be prepared.

3. Design & Construction detailing tips

i. The use of building overhangs and other structures which protect the beams from excessive moisture movement and sun exposure.
ii. Shielding of the beam from free moisture or direct sun. The use of metal, fibro or plastic shields on the exposed faces or ends of beams is highly recommended to help maintain the beam in an unstressed dry condition.
iii. All beams should be provided with adequate ventilation so that moisture content within beams will not exceed 15% and moisture gradients across the beam will not occur.
iv. The use of arrised or round edges on beams to reduce the likelihood of coating failures on sharp edges.
v. The use of drip edges or other devices which provide a path for free moisture flow away from the timber beam. Refer to detail below.
vi. Joint detailing should, wherever possible, comply with the following:
    - Keep horizontal contact areas to a minimum, In favour of self draining vertical surfaces.
    - Ventilate joint surfaces by using spacers, wherever possible.
    - Always use compatible fasteners which have adequate corrosion protection and do not cause splitting during installation e.g. Hot dipped galvanic coatings or stainless steel.
    - Ensure any moisture entering a joint is not trapped but can adequately drain away from the joint.
vii. Allow for thermal expansion/contraction in the joint design.



Capping details | Typical end protection | Column base to allow free drainage

PAINTING LOSP TREATED SmartLam BEAMS

Wait until excess solvents have evaporated and timber is dry. The pressure of the solvent (white spirits) from the LOSP treatment may affect the drying and hardening of paints if there has been insufficient evaporation time after the treatment. It is strongly recommended that the treated timber is left to recondition for at least 7 days in the end use situation before painting.
Resin bleeding can occasionally be a problem with LOSP treated softwoods. See "RESIN BLEEDS" below

One coat of premium quality primer as a minimum should be applied to all surfaces prior to erection of beam and to any cuts or holes drilled. If the first coat of primer, sealant paint or stain fails to dry or adhere within the time expected, do not proceed to any further coats until the first coat has achieved satisfactory dryness and adhesion. If the first coat fails to dry it may be necessary to strip back to bare timber and allow it to weather for another week or two.

1 Paint

- Exterior solid colour acrylic finish. One coat of oil based primer followed by one or two coats of the exterior acrylic finish as required.
- Exterior solid colour oil based enamel. One coat of oil based primer followed by one coat of oil based undercoat (if required) then two coats of the oil based enamel.

2 Stains

Exterior semi-transparent or solid colour penetrating oil based stain or similar. Two or three coats of the stain as required or recommended by the manufacturer.

Water based stains and un-pigmented sealants, oil or water repellents are NOT recommended.

RESIN BLEED

Resin Bleed may be identified by a sticky, clear or white exudation that has a characteristic aromatic odour. It is most commonly encountered around knots or other imperfections in the wood and in places where the tree sustained damage. Paint or stain will generally be softened and may even be lifted off by a resin bleed.

If resin bleed occurs the following steps are recommended:

i. Physically remove the exuded resin from the surface
ii. Allow to weather for a few days to ensure the bleed has ceased.
iii. Seal the affected area with a suitable sealant such as Resene Everseal.

Further advice mat be obtained from AS 2311

FIRE RATINGS (RESISTANCE)

In a fire, SmartLam GL17 beams have an inherent fire rating. As timber burns, a layer of charcoal forms enclosing a core of timber which is yet unaffected by the fire. This timber core maintains its structural capacity. Hence, dependant upon the loss of material to the charcoal layer, the SmartLam GL17 beam can carry the dead load of the structure for a period of time.

Resistance to fire can be established by reference to AS 1720.4 Fire Resistance of Structural Timber Members, using a charring rate of 0.66 mm per minute. Therefore, the strength and stiffness after fire may be assessed using the uncharred residual cross section computed for the period of exposure to the fire.

CHECKING IN SmartLam GLULAM

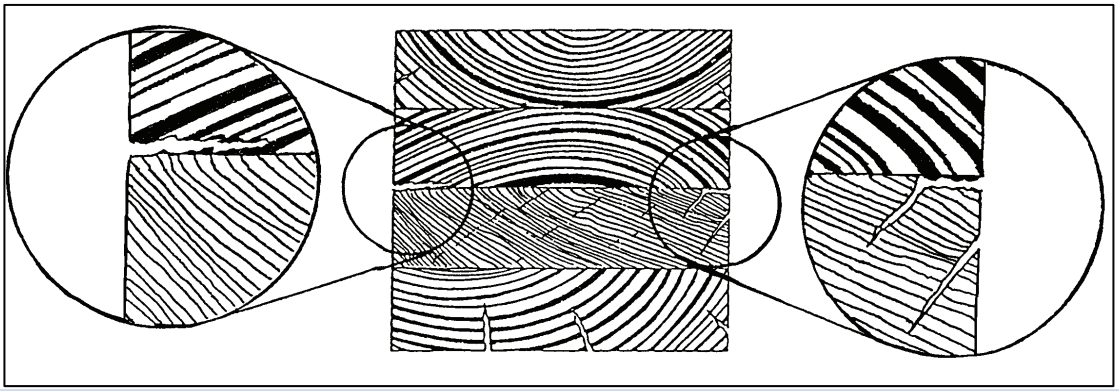
One of the advantages of glued laminated timber construction is that while seasoning checks may occur for the same reasons that they do in sawn members, checking in glued laminated timber will generally occur to a much lesser degree because of careful control of the moisture content of timber used for laminating. Checks in wood are separations along the fibres normally occurring across the rings of annual growth resulting from stresses developed during changes in moisture content. Checks in glued laminate timber may appear as openings parallel to the grain on the sides of members.

As wood loses moisture to the surrounding atmosphere, the outer fibres of the member lose moisture at a more rapid rate than do the inner fibres. As outer fibres try to shrink, they are restrained by the inner portion of the member that has higher moisture content. The more rapid the rate of drying, the greater will be the differential in shrinkage between the outer and inner fibres resulting in higher shrinkage stresses.

These resultant stresses perpendicular to the grain of the wood can cause characteristic wood seasoning checks. The influence of checks on the structural performance of glued laminated timber members is generally minor. Checking can be minimized by careful installation practices that avoid prolonged exposure of the members during construction.

IDENTIFICATION OF CHECKING

Checks occur as transverse separations or openings that are nearly parallel to the grain direction in glued laminated timber and generally follow the grain direction around knots and along sloping grain. Differences in the shrinkage rate of individual laminations used is glued laminated timber tend to concentrate shrinkage stresses at or near glue lines, resulting in checks.
Checks are often confused with delamination that occurs when the glue bond is not adequate. The presence of wood fibre separation in these openings is the key distinguishing characteristic of seasoning checks. Openings due to inadequate adhesive bonding may appear as smooth wood surface separations, possibly darkened by the adhesive film, or as glossy surface areas of adhesive with an absence of torn wood fibres.



CHECKING IN SmartLam GLULAM (Cont'd)

Checking often occurs along the first glue line adjacent to the outer lamination that may dry more rapidly because a larger surface area of that lamination is exposed to the air. This condition is sometimes aggravated when the outer lamination tends to cup, creating tension perpendicular to grain stresses along or near the first glue line.

SIGNIFICANCE OF CHECKING

In general, checks have little effect on the strength of glued laminated members. Glued laminated members are made from laminations that are thin enough to season readily in kiln drying schedules without developing checks. Checks usually appear on the wide faces of the timber and do not materially affect the shear strength of the laminations. In cases where members are designed for loading parallel to the wide face of the laminations, checks may affect the shear strength of the beam their effect may be evaluated in the same manner as for sawn timber. Seasoning checks in bending members affect only the horizontal shear capacity.

In establishing allowable horizontal shear values, normal checking due to seasoning has been considered.

Checks are usually not of structural importance unless they are significant in depth, occur in the mid-height of the member near the supports, and the design of the member is governed by shear. If these conditions exist, the reduction in shear strength is directly proportional to the ratio of the depth of checks to the width of the bending member. Checks in columns are not of structural importance unless the check develops into a split, thereby increasing the L/d ratio of the column.

ADDITIONAL INFORMATION

While checking is not considered to be of structural significance, the reason for the checking and the means by which further checking may be minimized should be determined.

If there is concern regarding structural adequacy, advice can be obtained from engineers from the SmartFrame Design Centre or a structural engineer experienced and qualified in glued laminated timber technology should evaluate the significance of the checking.

The SmartFrame **Technical Note - "Evaluation of Checking in Glued Laminated Timber (Glulam)" gives detailed analysis of the modification to structural capacity as a result of severe checking.**

SAFETY PRECAUTIONS:

WOOD DUST

(For all Wood Dust, Wood and Wood Products Not Preservative Treated)

CAUTION

WOOD DUST CAN BE PRODUCED BY SAWING, SANDING OR MACHINING WOOD AND WOOD PRODUCTS
FLAMMABLE - POSSIBLE EXPLOSION HAZARD
MAY CAUSE RESPIRATORY, EYE AND SKIN IRRITATION
SOME SPECIES MAY CAUSE DERMATITIS OR ALLERGIC RESPONSE
THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) CLASSIFIES WOOD DUST AS A NASAL CARCINOGEN IN HUMANS
For Additional information, see the Material Data Sheet

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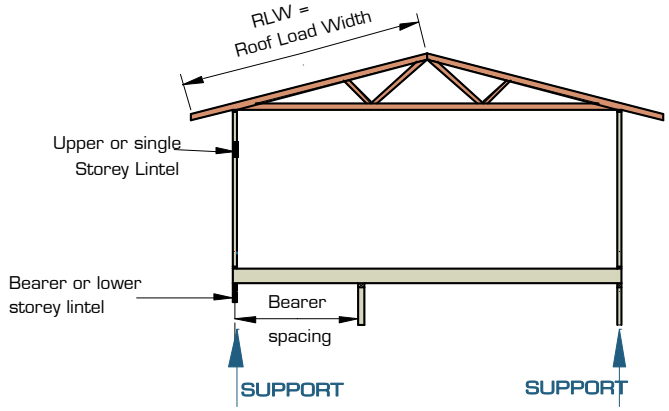
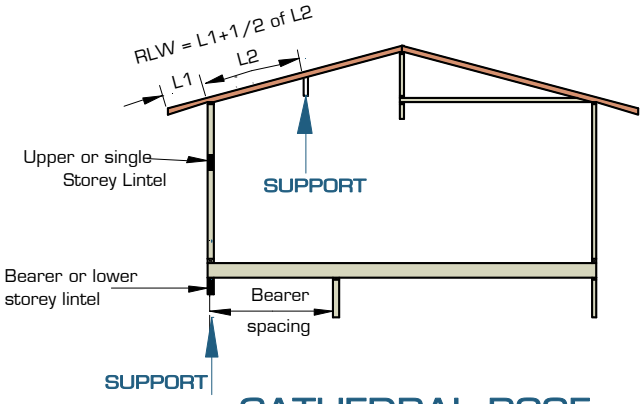
LISTS OR TABLES AND CHARTS

DETERMINATION OF ROOF LOAD WIDTH

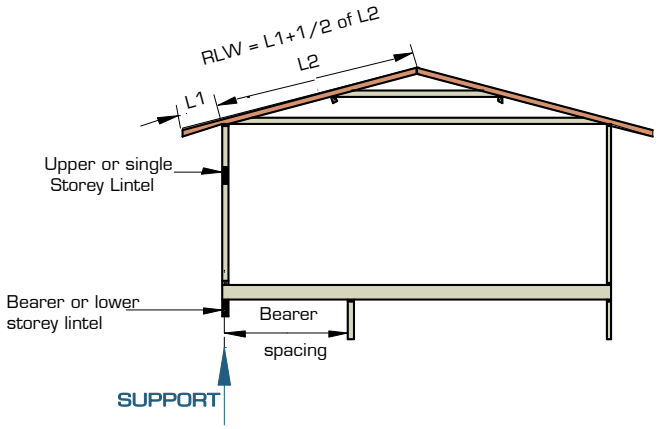
"Roof Load Width" (RLW) applies to wall framing members only (e.g. bearers under walls, lintels etc) and determines the loads carried by the walls. Typical examples of RLW are shown below, a far more comprehensive list is shown in AS 1684.2



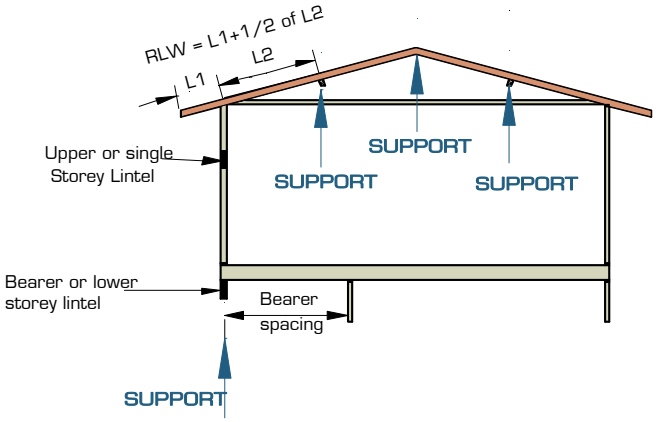
TRUSSED ROOF



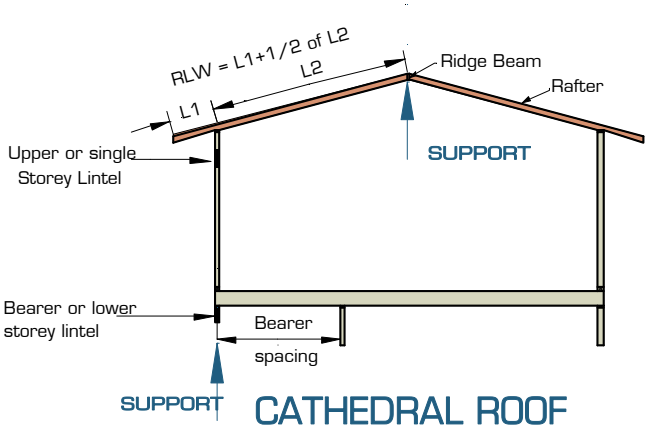
CATHEDRAL ROOF



CONVENTIONAL ROOF
COUPLED, UNSTRUTTED RIDGE



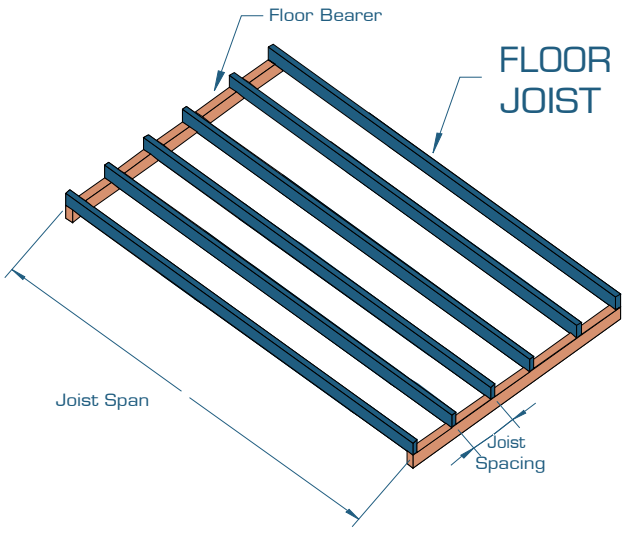
CONVENTIONAL ROOF
COUPLED, STRUTTED RIDGE



CATHEDRAL ROOF

FLOOR JOISTS SUPPORTING FLOOR LOADS ONLY

Floor mass - 40 kg/m^2



EXAMPLE:

domestic floor loads
single span
joist spacing = 450 mm
joist span = 6000 mm

Enter single span table at 450 mm in joist spacing column, read down to a span equal to or greater than 6000 mm

ADOPT:
SmartLam GL17 - 260x65

Loadings: Permanent - Self weight + 40 kg/m^2 +0.6 kPa of the live load, live load - 1.5 kPa or floor point load of 1.8 kN

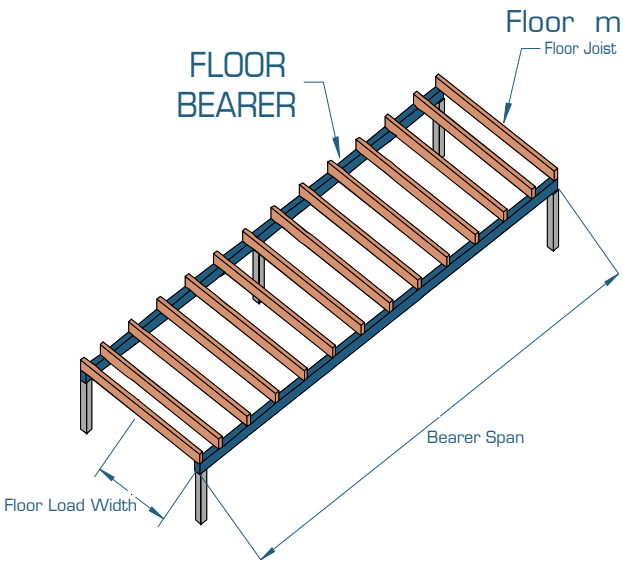
Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Joist spacing (mm)	300	450	600	300	450	600
Member size DxB (mm)	Maximum allowable span (mm)					
	single span			Continuous span		
130x65	4200	3350	3050	4850	4050	3550
165x65	5000	4400	3950	5800	5250	4600
195x65	5650	5100	4700	6600	5950	5550
230x65	6400	5800	5400	7450	6750	6250
260x65	7050	6350	5900	8150	7400	6850
295x65	7750	7000	6500	8950	8100	7550
330x65	8400	7600	7050	9750	8800	8200
360x65	8950	8100	7550	9950	9400	8750
395x65	9600	8700	8100	10000	9950	9400
425x65	9950	9200	8550	10500	9950	9900
460x65	9950	9750	9050	11100	9950	9950
495x65	10000	9950	9600	11750	9950	9950
525x65	10350	9950	9950	12000	9950	9950
560x65	10000	9950	9950	12000	10300	9950
590x65	9700	9950	9950	12000	10700	10000
130x85	4450	3700	3350	5200	4500	3900
165x85	5350	4850	4350	6200	5600	5100
195x85	6050	5500	5100	7050	6350	5900
230x85	6850	6200	5750	7950	7200	6700
260x85	7500	6800	6300	8750	7900	7350
295x85	8250	7450	6950	9600	8650	8050
330x85	9000	8100	7550	9950	9450	8800
360x85	9600	8650	8050	9950	9950	9350
395x85	9950	9300	8650	10600	9950	9950
425x85	9950	9800	9150	11200	9950	9950
460x85	10000	9950	9700	11850	9950	9950
495x85	10550	9950	9950	12000	10050	9950
525x85	10200	9950	9950	12000	10500	9950
560x85	9750	9950	9950	12000	11000	10250
590x85	9500	9800	9950	12000	11400	10650

NOTES:

1. Spans are suitable for solid timber, particle board and ply flooring. floor sheeting glued and nailed to joists will improve floor rigidity. Where heavy overlay material is to be applied, such as a mortar bed tiled or slate floor, the permanent load allowance should be increased to 1.2 kPa. A reduction of joist spacing may be used to accommodate this extra permanent load. A satisfactory result can be achieved by adopting the maximum spans for 600 mm and 450 mm spacing but installing the joists at 450 and 300 mm spacing respectively.
2. For beams which are continuous over two unequal spans, the design span and the 'resultant span description' depend upon the percentage span differences between the two spans as shown on page 7
3. D = member depth, B = member breadth, NS = not suitable.
4. The above table was based on a maximum DL of 40 (kg/m^2), floor live load of 1.5 (kPa), floor point load of 1.8 (kN).
5. End bearing lengths = 42 mm at end supports and 58 mm at internal supports for continuous members.
6. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE SPAN FLOOR BEARERS SUPPORTING FLOOR LOADS ONLY



EXAMPLE:

single span bearer = 4000 mm
floor load width = 6000 mm

Enter single span table at 6000 mm in floor load width column, read down to a span equal to or greater than 4000 mm

ADOPT:
SmartLam GL17 - 295x65 mm

Loadings: Permanent - Self weight + 40 kg/m² +0.6 kPa of the live load, live load - 1.5 kPa or floor point load of 1.8 kN

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Floor load width (mm)		1200	1800	2400	3000	3600	4200	4800	5400	6000	6600
Member size DxB (mm)	Floor mass (kg/m²)	Maximum Bearer span (mm)									
		single span									
130x65	40	2700	2350	2100	1950	1800	1700	1650	1550	1450	1350
165x65	40	3450	3000	2700	2500	2350	2200	2050	1950	1850	1750
195x65	40	4000	3600	3200	2950	2800	2600	2450	2300_{5}	2200_{5}	2050_{10}
230x65	40	4600	4100	3800	3550	3300	3100_{5}	2900_{10}	2700_{10}	2550_{15}	2450_{20}
260x65	40	5100	4550	4200	3950	3750_{10}	3500_{10}	3250_{15}	3050_{20}	2900_{25}	2750_{25}
295x65	40	5700	5100	4650	4350_{5}	4150_{15}	3950_{20}	3700_{25}	3500_{30}	3300_{30}	3150_{35}
330x65	40	6300	5600	5150_{5}	4800_{10}	4550_{20}	4350_{25}	4100_{30}	3850_{35}	3650_{40}	3500_{45}
360x65	40	6850	6050	5550_{5}	5200_{15}	4900_{25}	4700_{30}	4450_{35}	4200_{40}	3950_{45}	3750_{50}
395x65	40	7500	6600	6050_{10}	5650_{20}	5350_{30}	5100_{35}	4850_{45}	4550_{50}	4300_{55}	4100_{60}
425x65	40	8050	7100_{5}	6450_{15}	6050_{25}	5700_{35}	5400_{40}	5150_{50}	4850_{55}	4600_{60}	4400_{65}
460x65	40	8700	7650_{10}	6950_{20}	6500_{30}	6100_{40}	5800_{45}	5550_{55}	5250_{60}	4950_{65}	4700_{70}
495x65	40	9400	8200_{15}	7500_{25}	6950_{35}	6550_{45}	6250_{55}	5950_{60}	5600_{70}	5300_{75}	5050_{80}
130x85	40	2950	2550	2300	2150	2000	1900	1800	1700	1650	1550
165x85	40	3750	3300	2950	2750	2550	2400	2300	2200	2100	2000
195x85	40	4300	3850	3550	3250	3050	2900	2750	2600	2500	2350_{5}
230x85	40	4950	4400	4050	3800	3600	3450	3250_{5}	3100_{5}	2950_{10}	2800_{10}
260x85	40	5500	4900	4500	4250	4000	3850_{5}	3700_{10}	3500_{10}	3300_{15}	3150_{20}
295x85	40	6150	5500	5050	4700	4450_{5}	4250_{10}	4100_{15}	3950_{20}	3750_{20}	3600_{25}
330x85	40	6850	6050	5550	5200	4900_{10}	4700_{15}	4500_{20}	4350_{25}	4150_{30}	3950_{30}
360x85	40	7400	6550	6000	5600_{5}	5300_{10}	5050_{20}	4850_{25}	4700_{30}	4500_{35}	4300_{40}
395x85	40	8100	7150	6550_{5}	6100_{10}	5750_{15}	5500_{25}	5250_{30}	5050_{35}	4900_{40}	4700_{45}
425x85	40	8750	7700	7000_{5}	6550_{15}	6150_{20}	5850_{25}	5600_{35}	5400_{40}	5250_{45}	5000_{50}
460x85	40	9450	8300	7550_{10}	7050_{20}	6650_{25}	6300_{30}	6050_{40}	5800_{45}	5600_{55}	5400_{60}
495x85	40	10200	8950_{5}	8150_{15}	7550_{20}	7100_{30}	6750_{40}	6450_{45}	6200_{50}	6000_{60}	5750_{65}
525x85	40	10700	9500_{5}	8650_{15}	8000_{25}	7550_{35}	7150_{40}	6850_{50}	6550_{60}	6350_{65}	6050_{70}
560x85	40	11250	10150_{10}	9250_{20}	8550_{30}	8050_{40}	7600_{50}	7250_{55}	7000_{65}	6750_{70}	6450_{80}
590x85	40	11700	10550_{15}	9750_{25}	9000_{35}	8450_{45}	8000_{50}	7650_{60}	7350_{70}	7100_{80}	6750_{85}

CONTINUOUS SPAN FLOOR BEARERS SUPPORTING FLOOR LOADS ONLY

Floor mass - 40 kg/m^2

Loadings: Permanent - Self weight + 40 kg/m^2 +0.6 kPa of the live load, live load - 1.5 kPa or floor point load of 1.8 kN

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

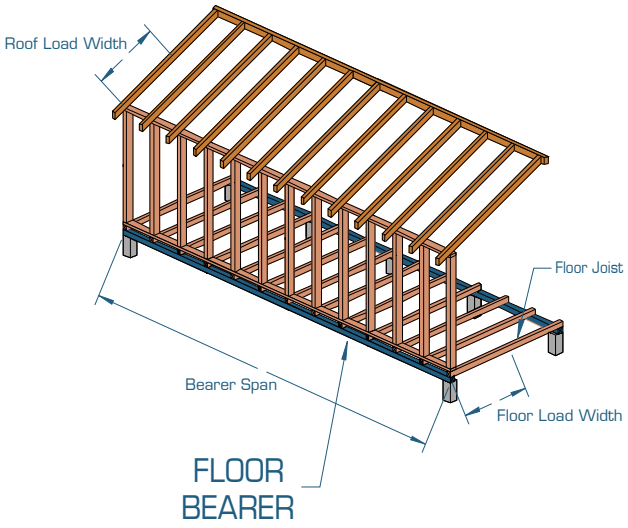
Floor load width (mm)		1200	1800	2400	3000	3600	4200	4800	5400	6000	6600
Member size DxB (mm)	Floor mass (kg/m^2)	Maximum Bearer span (mm)									
		Continuous span									
130x65	40	3300	2700	2350	2100	1900	1750	1650	1550_{5}	1450_{10}	1350_{15}
165x65	40	4200	3400	2950	2650	2400_{5}	2200_{15}	2050_{20}	1950_{25}	1850_{30}	1750_{35}
195x65	40	4750	4050	3500_{5}	3100_{15}	2850_{25}	2600_{30}	2450_{40}	2300_{45}	2200_{55}	2050_{60}
230x65	40	5350	4750_{5}	4100_{20}	3650_{30}	3350_{40}	3100_{50}	2900_{60}	2700_{70}	2550_{75}	2450_{85}
260x65	40	5850	5300_{15}	4650_{30}	4150_{45}	3800_{55}	3500_{65}	3250_{80}	3050_{90}	2900_{100}	2750_{110}
295x65	40	6400	5800_{25}	5250_{45}	4700_{60}	4300_{75}	3950_{90}	3700_{100}	3500_{110}	3300_{120}	3150_{130}
330x65	40	6950_{5}	6300_{35}	5850_{60}	5200_{75}	4750_{95}	4400_{105}	4100_{120}	3850_{130}	3650_{140}	3500_{150}
360x65	40	7450_{10}	6750_{40}	6300_{70}	5650_{90}	5150_{105}	4750_{120}	4450_{135}	4200_{145}	3950_{155}	3750_{165}
395x65	40	7950_{15}	7200_{50}	6700_{85}	6150_{105}	5600_{120}	5200_{135}	4850_{150}	4550_{165}	4300_{175}	4100_{185}
425x65	40	8400_{25}	7600_{55}	7100_{95}	6550_{120}	6000_{135}	5550_{150}	5150_{165}	4850_{180}	4600_{190}	4400_{205}
460x65	40	8900_{30}	8050_{65}	7500_{105}	7050_{130}	6450_{150}	5950_{165}	5550_{180}	5250_{195}	4950_{210}	4700_{225}
495x65	40	9350_{35}	8500_{75}	7950_{115}	7500_{145}	6900_{165}	6350_{180}	5950_{200}	5600_{215}	5300_{230}	5050_{245}
130x85	40	3750	3100	2650	2400	2150	2000	1850	1750	1650	1550
165x85	40	4450	3900	3400	3000	2750	2550	2350_{5}	2250_{15}	2100_{20}	2000_{25}
195x85	40	5050	4550	4000	3550	3250_{10}	3000_{15}	2800_{25}	2650_{30}	2500_{35}	2350_{40}
230x85	40	5700	5150	4700_{5}	4200_{15}	3800_{25}	3550_{35}	3300_{40}	3100_{50}	2950_{55}	2800_{65}
260x85	40	6250	5650	5250_{15}	4750_{30}	4300_{40}	4000_{50}	3750_{60}	3500_{65}	3300_{75}	3150_{85}
295x85	40	6850	6200_{5}	5800_{25}	5350_{40}	4900_{55}	4500_{65}	4200_{75}	4000_{90}	3750_{100}	3600_{105}
330x85	40	7400	6750_{15}	6250_{35}	5950_{55}	5450_{70}	5000_{85}	4700_{95}	4400_{105}	4150_{115}	3950_{125}
360x85	40	7900	7200_{20}	6700_{45}	6300_{65}	5900_{85}	5450_{100}	5050_{110}	4750_{120}	4500_{130}	4300_{140}
395x85	40	8450	7700_{25}	7150_{50}	6750_{75}	6400_{100}	5900_{115}	5500_{125}	5200_{135}	4900_{145}	4700_{160}
425x85	40	8900_{5}	8100_{35}	7550_{60}	7150_{85}	6850_{110}	6300_{125}	5900_{135}	5550_{150}	5250_{160}	5000_{170}
460x85	40	9400_{10}	8600_{40}	8000_{70}	7600_{100}	7250_{120}	6800_{140}	6350_{150}	5950_{165}	5650_{175}	5400_{190}
495x85	40	9950_{15}	9050_{45}	8450_{80}	8000_{105}	7650_{130}	7250_{150}	6800_{165}	6400_{180}	6050_{195}	5750_{205}
525x85	40	10350_{20}	9450_{50}	8800_{85}	8350_{115}	8000_{140}	7650_{165}	7150_{180}	6750_{195}	6350_{205}	6050_{220}
560x85	40	10850_{25}	9900_{60}	9250_{95}	8750_{125}	8350_{150}	8050_{175}	7600_{195}	7150_{210}	6750_{225}	6450_{240}
590x85	40	11250_{30}	10300_{65}	9600_{100}	9100_{130}	8700_{160}	8350_{185}	7950_{205}	7500_{220}	7100_{240}	6750_{250}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a maximum DL of 40 (kg/m^2), floor live load of 1.5 (kPa), floor point load of 1.8 (kN).
3. End bearing lengths = 42 mm at end supports and 58 mm at internal supports for continuous members.Subscript values indicate the minimum additional bearing length where required to be greater than 42 mm at end supports and 58 mm at internal supports.
4. Restraint value for slenderness calculations is 600 mm. (floor joist centers at 600 mm max)
5. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

FLOOR BEARERS SUPPORTING SINGLE STOREY LOAD BEARING WALL - SHEET AND TILED ROOF

Floor mass - 40 kg/m^2



EXAMPLE:

sheet roof - 40 kg/m^2
roof load width = 1950 mm
bearer span = 3000 mm (single span)
floor load width = 3500 mm

Enter single span table at 2400 mm in floor load width column, 4500 roof load width column, read down to a span equal to or greater than 3000 mm in the 40 kg/m^2 row.

ADOPT:
SmartLam GL17 - 2/240 x 35

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

SINGLE SPAN

Floor load width (mm)		1200			2400			4800		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Bearer span (mm)								
		Single span								
130x65	40	2100	1900	1700	1800	1700	1600	1500	1450	1400
	75	2000	1700	1500	1750	1550	1400	1500	1350	1300
165x65	40	2700	2400	2200	2350	2150	2050	1950	1850	1750
	75	2550	2150	1950	2250	2000	1800	1900	1750	1650_{5}
195x65	40	3200	2850	2650	2800	2600	2400	2300_{5}	2200_{5}	2100_{5}
	75	3050	2600	2300	2700	2350	2150	2250_{5}	2100_{5}	1950_{10}
230x65	40	3750	3400	3150	3300	3050	2850	2750_{10}	2600_{15}	2500_{15}
	75	3600	3050	2750	3200	2800	2550_{10}	2700_{15}	2500_{15}	2300_{20}
260x65	40	4200	3800	3550	3750	3500	3250_{5}	3100_{20}	3000_{20}	2850_{20}
	75	4000	3500	3100_{5}	3650	3200_{5}	2950_{15}	3050_{20}	2800_{25}	2650_{30}
295x65	40	4650	4250	3950	4150_{5}	3900_{5}	3700_{10}	3500_{25}	3400_{30}	3250_{30}
	75	4450	3900_{5}	3550_{15}	4050_{5}	3650_{15}	3350_{20}	3450_{30}	3200_{30}	3000_{40}
330x65	40	5150	4650	4350_{5}	4550_{5}	4300_{10}	4050_{15}	3900_{35}	3750_{35}	3650_{40}
	75	4900	4300_{10}	3900_{20}	4450_{10}	4000_{20}	3750_{30}	3850_{35}	3600_{40}	3350_{45}
360x65	40	5550	5050_{5}	4700_{10}	4900_{10}	4600_{15}	4400_{20}	4200_{40}	4050_{45}	3950_{45}
	75	5300	4600_{10}	4200_{25}	4800_{15}	4300_{25}	4000_{35}	4150_{40}	3900_{45}	3600_{55}
395x65	40	6000	5450_{5}	5100_{15}	5350_{15}	5000_{20}	4750_{25}	4550_{45}	4400_{50}	4250_{55}
	75	5750	5000_{15}	4550_{30}	5200_{15}	4650_{30}	4350_{40}	4500_{50}	4200_{55}	3950_{60}
425x65	40	6450	5850_{10}	5450_{15}	5700_{20}	5350_{25}	5050_{30}	4850_{55}	4700_{55}	4500_{60}
	75	6150_{5}	5350_{20}	4850_{35}	5550_{20}	5000_{35}	4600_{45}	4800_{55}	4500_{60}	4200_{70}
460x65	40	6950_{5}	6300_{15}	5850_{20}	6150_{25}	5750_{30}	5400_{35}	5200_{60}	5000_{65}	4850_{65}
	75	6600_{10}	5750_{25}	5200_{40}	5950_{25}	5350_{40}	4950_{50}	5150_{60}	4800_{65}	4500_{75}
495x65	40	7450_{10}	6750_{15}	6250_{25}	6550_{30}	6150_{35}	5800_{40}	5600_{65}	5350_{70}	5150_{75}
	75	7100_{10}	6100_{30}	5550_{45}	6350_{30}	5700_{45}	5300_{60}	5450_{70}	5100_{75}	4850_{85}

FLOOR BEARERS SUPPORTING SINGLE STOREY LOAD BEARING WALL - SHEET AND TILED ROOF

SINGLE SPAN [Cont'd]

Floor load width (mm)		1200			2400			4800		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Bearer span (mm)								
		Single span								
130x85	40	2300	2050	1900	2000	1850	1750	1650	1600	1500
	75	2200	1850	1650	1950	1700	1550	1600	1500	1400
165x85	40	2950	2650	2450	2550	2350	2200	2150	2050	1950
	75	2800	2350	2100	2450	2200	2000	2100	1900	1800
195x85	40	3500	3150	2900	3050	2850	2650	2550	2400	2300
	75	3350	2850	2550	2950	2600	2350	2500	2300	2150_{5}
230x85	40	4050	3700	3450	3650	3350	3150	3000_{5}	2850_{5}	2750_{5}
	75	3900	3350	3000	3500	3100	2850	2950_{5}	2700_{5}	2550_{10}
260x85	40	4500	4100	3850	4000	3800	3600	3450_{10}	3250_{10}	3150_{15}
	75	4300	3800	3400	3900	3500	3200_{5}	3350_{10}	3100_{15}	2900_{15}
295x85	40	5000	4600	4250	4450	4200	4000_{5}	3850_{15}	3700_{20}	3600_{20}
	75	4800	4200	3850_{5}	4350	3950_{5}	3650_{10}	3800_{15}	3550_{20}	3300_{25}
330x85	40	5550	5050	4700	4950	4600_{5}	4400_{5}	4250_{20}	4050_{25}	3950_{25}
	75	5300	4600	4200_{10}	4800	4300_{10}	4000_{15}	4150_{25}	3900_{25}	3700_{35}
360x85	40	6000	5450	5050	5300_{5}	5000_{5}	4700_{10}	4550_{25}	4400_{30}	4250_{30}
	75	5700	5000_{5}	4550_{10}	5150_{5}	4650_{10}	4300_{20}	4450_{25}	4200_{30}	4000_{40}
395x85	40	6550	5900	5500_{5}	5800_{5}	5400_{10}	5100_{15}	4950_{30}	4750_{35}	4600_{35}
	75	6250	5400_{5}	4900_{15}	5600_{10}	5050_{15}	4700_{25}	4850_{35}	4550_{40}	4300_{45}
425x85	40	7000	6350	5900_{10}	6200_{10}	5750_{15}	5450_{20}	5250_{35}	5050_{40}	4900_{40}
	75	6650	5750_{10}	5250_{20}	6000_{10}	5400_{20}	5000_{30}	5150_{40}	4850_{45}	4600_{50}
460x85	40	7550	6800_{5}	6350_{10}	6650_{15}	6200_{20}	5850_{25}	5650_{45}	5400_{45}	5250_{50}
	75	7200	6200_{15}	5650_{25}	6450_{15}	5800_{25}	5350_{35}	5550_{45}	5200_{50}	4900_{55}
495x85	40	8100	7300_{10}	6800_{15}	7150_{20}	6650_{20}	6300_{30}	6050_{50}	5800_{50}	5600_{55}
	75	7700_{5}	6650_{15}	6000_{30}	6900_{20}	6200_{30}	5700_{40}	5950_{50}	5550_{55}	5250_{65}
525x85	40	8600_{5}	7750_{10}	7200_{20}	7550_{20}	7050_{25}	6650_{30}	6400_{55}	6100_{55}	5900_{60}
	75	8200_{5}	7050_{20}	6350_{35}	7300_{20}	6550_{35}	6050_{45}	6250_{55}	5850_{60}	5500_{70}
560x85	40	9200_{5}	8250_{15}	7650_{20}	8050_{25}	7500_{30}	7050_{35}	6800_{60}	6500_{60}	6250_{65}
	75	8750_{10}	7500_{25}	6750_{40}	7800_{25}	6950_{40}	6400_{50}	6650_{60}	6200_{65}	5850_{75}
590x85	40	9700_{10}	8700_{20}	8050_{25}	8500_{30}	7900_{35}	7450_{40}	7150_{65}	6850_{70}	6550_{70}
	75	9200_{15}	7900_{30}	7100_{45}	8200_{30}	7300_{45}	6700_{55}	7000_{65}	6500_{70}	6150_{85}

NOTES:

D = member depth, B = member breadth, NS = not suitable.
The above table was based on a maximum DL of 40 (kg/m^2), Total ground floor mass of 40 (kg/m^2), Total wall mass of 37 (kg/m^2), floor live load of 1.5 (kPa), floor point load of 1.8 (kN).
The above table was based on a wall height of 2700.
End bearing lengths = 42 mm at end supports and 58 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 30 mm at end supports and 42 mm at internal supports.
Restraint value for slenderness calculations is 600 mm.
Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

FLOOR BEARERS SUPPORTING SINGLE STOREY LOAD BEARING WALL - SHEET AND TILED ROOF

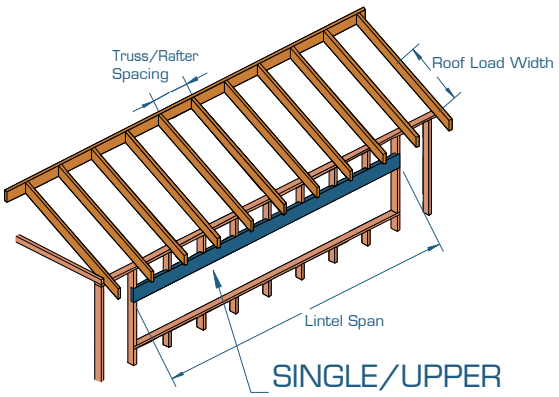
CONTINUOUS SPAN

Floor load width (mm)		1200			2400			4800		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size DxB (mm)	Roof mass (kg/m²)	Maximum Bearer span (mm)								
		Continuous span								
130x65	40	2750	2450	2150	2100	1950	1850	1550_{5}	1500_{5}	1450_{10}
	75	2600	2050	1750	2050	1800	1600	1500_{5}	1400_{10}	1350_{15}
165x65	40	3450	3100	2750	2650	2500_{5}	2350_{10}	1950_{25}	1900_{30}	1800_{35}
	75	3300	2650	2200_{15}	2600	2300_{10}	2050_{20}	1950_{30}	1800_{35}	1700_{40}
195x65	40	4000	3650	3200_{10}	3150_{10}	2950_{20}	2800_{25}	2300_{45}	2250_{50}	2150_{55}
	75	3850	3100_{15}	2650_{30}	3050_{15}	2750_{25}	2450_{40}	2300_{45}	2150_{55}	2000_{60}
230x65	40	4550	4200_{10}	3800_{25}	3700_{30}	3500_{35}	3300_{40}	2750_{65}	2650_{75}	2550_{80}
	75	4350_{5}	3650_{30}	3100_{50}	3600_{30}	3250_{45}	2900_{60}	2700_{70}	2500_{80}	2400_{95}
260x65	40	5000_{5}	4600_{20}	4300_{40}	4200_{40}	3950_{50}	3700_{60}	3100_{90}	3000_{95}	2900_{100}
	75	4800_{10}	4150_{45}	3500_{65}	4050_{45}	3650_{60}	3250_{80}	3050_{90}	2850_{105}	2700_{110}
295x65	40	5500_{15}	5050_{30}	4750_{50}	4750_{60}	4450_{70}	4200_{80}	3500_{110}	3400_{115}	3250_{120}
	75	5250_{20}	4650_{60}	3950_{90}	4600_{65}	4150_{80}	3700_{100}	3450_{115}	3250_{125}	3050_{135}
330x65	40	5950_{25}	5500_{40}	5150_{85}	5250_{75}	4950_{90}	4650_{100}	3900_{130}	3750_{135}	3650_{145}
	75	5750_{30}	5050_{75}	4400_{105}	5100_{80}	4600_{100}	4100_{120}	3850_{130}	3600_{145}	3400_{155}
360x65	40	6350_{30}	5850_{45}	5500_{75}	5700_{90}	5350_{100}	5050_{110}	4200_{145}	4050_{150}	3950_{160}
	75	6100_{35}	5400_{85}	4750_{120}	5550_{95}	4950_{115}	4450_{135}	4150_{145}	3900_{160}	3650_{175}
395x65	40	6850_{40}	6250_{55}	5900_{90}	6200_{105}	5800_{115}	5500_{125}	4600_{160}	4400_{170}	4250_{175}
	75	6550_{45}	5800_{100}	5150_{135}	6050_{110}	5400_{130}	4800_{150}	4500_{165}	4250_{180}	4000_{195}
425x65	40	7200_{45}	6600_{85}	6200_{100}	6600_{115}	6200_{125}	5850_{140}	4900_{175}	4750_{185}	4550_{195}
	75	6900_{55}	6100_{105}	5550_{150}	6450_{120}	5750_{140}	5150_{165}	4800_{180}	4500_{195}	4250_{210}
460x65	40	7650_{55}	7050_{75}	6600_{110}	7000_{125}	6600_{140}	6300_{150}	5250_{195}	5100_{205}	4900_{210}
	75	7350_{60}	6500_{120}	5950_{165}	6800_{130}	6200_{155}	5550_{180}	5200_{200}	4850_{215}	4600_{230}
495x65	40	8050_{60}	7400_{85}	6950_{120}	7400_{135}	6950_{150}	6650_{165}	5650_{210}	5450_{220}	5250_{230}
	75	7750_{70}	6850_{130}	6300_{180}	7200_{140}	6550_{170}	5900_{200}	5550_{215}	5200_{235}	4900_{250}
130x85	40	3000	2700	2450	2400	2250	2100	1750	1700	1650
	75	2850	2350	2000	2350	2100	1850	1750	1600	1550_{5}
165x85	40	3800	3450	3100	3050	2850	2700	2250_{10}	2150_{15}	2100_{20}
	75	3650	3000	2550	2950	2650	2350_{5}	2200_{15}	2050_{20}	1950_{25}
195x85	40	4300	3950	3700	3600	3350_{5}	3200_{10}	2650_{30}	2550_{35}	2450_{35}
	75	4100	3550	3000_{15}	3500_{5}	3150_{15}	2800_{25}	2600_{30}	2450_{40}	2300_{45}
230x85	40	4850	4450	4200_{10}	4250_{15}	3950_{20}	3750_{30}	3150_{50}	3000_{50}	2900_{55}
	75	4650	4100_{15}	3550_{35}	4100_{20}	3700_{30}	3300_{40}	3100_{50}	2900_{60}	2700_{65}
260x85	40	5350	4900	4600_{20}	4800_{30}	4500_{35}	4250_{40}	3550_{65}	3400_{70}	3300_{75}
	75	5100	4500_{25}	4000_{50}	4650_{30}	4150_{45}	3700_{55}	3500_{70}	3250_{80}	3100_{90}
295x85	40	5850	5400_{10}	5050_{30}	5400_{40}	5050_{50}	4800_{55}	4000_{85}	3850_{95}	3750_{100}
	75	5600_{5}	4950_{35}	4500_{65}	5200_{45}	4700_{80}	4200_{80}	3950_{90}	3700_{100}	3500_{110}
330x85	40	6350_{5}	5850_{20}	5500_{40}	5850_{50}	5500_{60}	5250_{70}	4450_{105}	4300_{110}	4150_{115}
	75	6100_{10}	5400_{45}	5000_{85}	5700_{55}	5150_{75}	4650_{95}	4350_{110}	4100_{120}	3850_{130}
360x85	40	6800_{10}	6250_{25}	5850_{45}	6250_{60}	5850_{70}	5600_{85}	4800_{120}	4650_{125}	4500_{130}
	75	6500_{20}	5750_{55}	5300_{95}	6050_{65}	5500_{85}	5050_{110}	4750_{120}	4450_{135}	4200_{145}
395x85	40	7300_{20}	6700_{35}	6300_{55}	6700_{70}	6300_{85}	6000_{95}	5250_{135}	5050_{140}	4900_{150}
	75	7000_{25}	6200_{85}	5700_{105}	6500_{75}	5900_{100}	5500_{125}	5150_{135}	4850_{150}	4550_{160}
425x85	40	7700_{25}	7050_{40}	6650_{65}	7050_{80}	6650_{95}	6300_{105}	5600_{150}	5400_{155}	5200_{160}
	75	7400_{30}	6550_{75}	6000_{115}	6850_{85}	6250_{110}	5800_{135}	5500_{150}	5150_{165}	4900_{180}
460x85	40	8150_{30}	7500_{45}	7050_{75}	7500_{95}	7050_{105}	6700_{115}	6000_{165}	5800_{170}	5600_{180}
	75	7850_{35}	6950_{85}	6400_{130}	7300_{100}	6600_{120}	6150_{150}	5900_{165}	5550_{180}	5250_{195}
495x85	40	8600_{35}	7900_{55}	7450_{85}	7900_{100}	7450_{115}	7100_{125}	6450_{180}	6200_{185}	6000_{195}
	75	8250_{45}	7300_{95}	6750_{140}	7700_{105}	7000_{130}	6500_{160}	6300_{180}	5950_{200}	5600_{215}
525x85	40	9000_{40}	8250_{60}	7750_{95}	8250_{110}	7750_{120}	7400_{135}	6800_{190}	6550_{200}	6300_{210}
	75	8650_{50}	7650_{105}	7050_{145}	8050_{115}	7300_{135}	6800_{170}	6650_{195}	6250_{210}	5900_{225}
560x85	40	9400_{50}	8650_{70}	8150_{105}	8650_{120}	8150_{130}	7750_{140}	7200_{205}	6950_{215}	6700_{225}
	75	9050_{55}	8000_{110}	7400_{160}	8400_{125}	7650_{145}	7150_{180}	7100_{210}	6650_{230}	6250_{245}
590x85	40	9800_{55}	9000_{75}	8450_{110}	9000_{125}	8450_{135}	8050_{150}	7550_{220}	7250_{230}	7050_{240}
	75	9400_{60}	8350_{120}	7700_{165}	8750_{130}	7950_{155}	7450_{190}	7400_{225}	6950_{240}	6600_{260}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a maximum DL of 40 (kg/m²), floor live load of 1.5 (kPa), floor point load of 1.8 (kN).
3. End bearing lengths = 42 mm at end supports and 58 mm at internal supports for continuous members.Subscript values indicate the minimum additional bearing length where required to be greater than 42 mm at end supports and 58 mm at internal supports.
4. Restraint value for slenderness calculations is 600 mm. (floor joist Centers at 600 mm max)
5. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE SPAN LINTELS IN SINGLE/UPPER STOREY WALLS AS 4055 CLASSIFICATION N1, N2 AND N3



SINGLE/UPPER STOREY LINTEL

EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
lintel span = 3500 mm
roof load width = 3900 mm
Enter span table at 4500 roof load width column, rafter/truss spacing 600 mm, and read down to a span equal to or greater than 3500 mm

ADOPT:

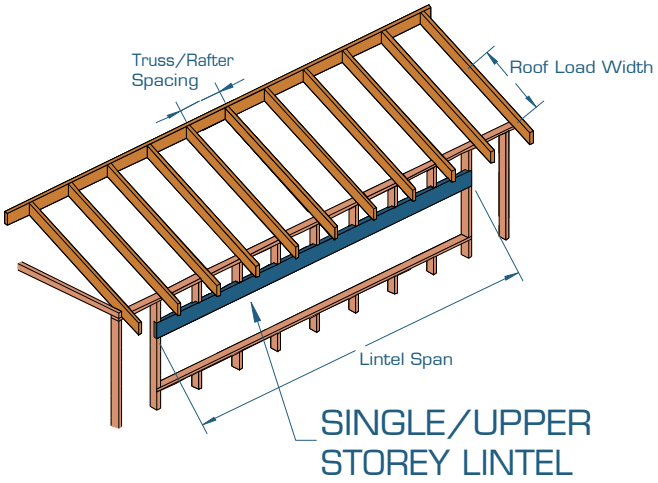
SmartLam GL17 - 190 x 65

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/Truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Lintel span (mm)									
		Single span									
130x65	40	3400	3400	2850	2850	2550	2500	2200	2100	1900	1700
	90	2750	2800	2200	2200	1900	1900	1700	1650	1600	1450
165x65	40	4150	4150	3450	3450	3100	3100	2800	2750	2550	2400
	90	3350	3300	2800	2800	2450	2500	2200	2200	2050_{5}	2000_{5}
195x65	40	4800	4800	4000	3950	3550	3550	3300	3200	2950	2850_{5}
	90	3850	3850	3200	3150	2850	2850	2650	2700_{10}	2450_{5}	2450_{15}
230x65	40	5600	5550	4600	4600	4100	4100	3800	3750	3550_{5}	3350_{5}
	90	4450	4450	3650	3650	3300	3250	3050	3000_{5}	2850_{10}	2850_{20}
260x65	40	6250	6250	5150	5150	4600	4550	4200	4200_{5}	3950_{5}	3850_{10}
	90	4950	4950	4050	4050	3650	3600	3350	3300_{5}	3150_{5}	3150_{15}
295x65	40	7050	7050	5750	5750	5100	5150	4700_{10}	4700_{10}	4400_{10}	4400_{15}
	90	5550	5550	4550	4550	4050_{5}	4050_{10}	3750_{10}	3700_{10}	3500_{20}	3450_{20}
330x65	40	7900	7900	6400	6400	5700	5650_{5}	5200_{5}	5200_{10}	4900_{20}	4850_{25}
	90	6200	6150	5050	5000	4500	4450_{5}	4100_{15}	4100_{25}	3850_{20}	3850_{20}
360x65	40	8600	8600	7000	6950	6150_{5}	6150_{5}	5650_{15}	5650_{20}	5300_{15}	5300_{25}
	90	6750	6750	5450	5450	4850_{10}	4800_{15}	4450_{15}	4450_{20}	4150_{30}	4150_{40}
395x65	40	9500	9500	7650	7650	6750_{10}	6750_{15}	6200_{20}	6150_{15}	5750_{25}	5750_{30}
	90	7400	7350	5950	5900	5250_{10}	5250_{15}	4850_{25}	4800_{30}	4550_{25}	4500_{35}
425x65	40	10250	10250	8250	8250_{5}	7250_{15}	7250_{15}	6600_{15}	6600_{20}	6200_{30}	6150_{30}
	90	7950	7950	6400_{5}	6350	5650_{15}	5600_{20}	5150_{25}	5150_{30}	4850_{40}	4800_{45}
460x65	40	11200	11200	8950_{5}	8950_{5}	7850_{10}	7850_{15}	7200_{25}	7150_{25}	6650_{30}	6700_{45}
	90	8650	8600	6900_{5}	6900_{10}	6100_{20}	6050_{15}	5550_{30}	5550_{40}	5200_{40}	5200_{45}
495x65	40	11950	11900	9700_{5}	9700_{10}	8500_{20}	8450_{20}	7700_{30}	7700_{30}	7200_{40}	7150_{45}
	90	9350	9350	7450_{10}	7400_{15}	6500_{20}	6500_{15}	5950_{30}	5950_{35}	5550_{50}	5550_{55}
130x85	40	3650	3650	3050	3050	2750	2750	2500	2450	2300	2150
	90	2950	2950	2400	2450	2100	2100	1900	1900	1750	1700
165x85	40	4500	4450	3700	3700	3350	3300	3100	3050	2850	2800
	90	3600	3550	3000	3000	2700	2700	2450	2450	2250	2250
195x85	40	5200	5200	4300	4300	3850	3800	3550	3500	3350	3250
	90	4150	4150	3450	3400	3050	3050	2850	2850	2700	2700_{5}
230x85	40	6000	6000	4950	4950	4450	4400	4100	4050	3850	3800
	90	4800	4800	3950	3950	3550	3500	3250	3250	3050	3050_{5}
260x85	40	6750	6750	5550	5550	4950	4950	4550	4500	4250	4250_{5}
	90	5350	5350	4400	4400	3900	3900	3600	3600	3400_{5}	3350_{5}
295x85	40	7600	7650	6250	6200	5550	5500	5100	5100	4800_{5}	4750_{5}
	90	6000	6000	4900	4900	4400	4350	4050_{5}	4000	3800_{10}	3750_{10}
330x85	40	8550	8500	6950	6950	6150	6150	5650	5650_{5}	5300_{15}	5300_{20}
	90	6700	6700	5450	5450	4850	4800_{5}	4450	4450_{5}	4150_{15}	4150_{20}
360x85	40	9350	9300	7550	7550	6700	6700_{5}	6150_{5}	6100_{5}	5750_{10}	5700_{15}
	90	7300	7300	5950	5900	5250	5250_{5}	4800_{10}	4800_{15}	4500_{10}	4500_{20}
395x85	40	10300	10300	8350	8300	7350_{5}	7300_{5}	6700_{10}	6700_{15}	6250_{15}	6250_{15}
	90	8000	8000	6450	6450	5700	5700_{5}	5250_{10}	5250_{15}	4900_{20}	4850_{25}
425x85	40	11150	11100	9000	9000	7900_{5}	7900_{10}	7200_{10}	7200_{15}	6700_{25}	6750_{25}
	90	8650	8650	6950	6950	6150_{10}	6100_{5}	5600_{15}	5600_{20}	5250_{20}	5250_{25}
460x85	40	12000	12000	9800	9750	8600_{10}	8550_{5}	7800_{15}	7800_{15}	7300_{30}	7250_{25}
	90	9400	9400	7500	7500_{5}	6600_{10}	6600_{5}	6050_{20}	6000_{15}	5650_{25}	5600_{35}
495x85	40	12000	12000	10600	10600_{5}	9300_{10}	9300_{15}	8450_{20}	8400_{20}	7850_{25}	7850_{25}
	90	10200	10200	8100_{5}	8100_{5}	7100_{10}	7100_{15}	6500_{20}	6450_{20}	6050_{35}	6000_{30}
525x85	40	12000	12000	11200_{5}	11200	9900_{15}	9900_{15}	9000_{20}	9000_{20}	8350_{30}	8300_{35}
	90	10950	10900	8650_{5}	8600_{5}	7550_{15}	7550_{20}	6850_{25}	6900_{30}	6400_{35}	6400_{30}
560x85	40	8000	8050	11750_{5}	11750_{10}	10650_{20}	10600_{20}	9650_{25}	9650_{30}	8950_{35}	8950_{35}
	90	12000	12000	9250_{10}	9300_{10}	8050_{20}	8050_{25}	7350_{30}	7300_{35}	6800_{35}	6850_{50}
590x85	40	7650	7650	12000_{5}	12000_{10}	11050_{15}	11050_{20}	10200_{30}	10200_{30}	9450_{45}	9450_{45}
	90	12000	12000	9800_{10}	9800_{15}	8550_{25}	8500_{25}	7750_{30}	7750_{35}	7200_{45}	7200_{50}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. Minimum bearing length = 35 mm at end supports. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm.
3. Restraint value for slenderness calculations is 600 mm.
4. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE SPAN LINTELS IN SINGLE/UPPER STOREY WALLS AS 4055 CLASSIFICATION C1, C2 AND C3



EXAMPLE:

wind speed = C3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
lintel span = 3500 mm
roof load width = 3900 mm
Enter span table at 4500 roof load width column, rafter/truss spacing 600 mm, and read down to a span equal to or greater than 3500 mm

ADOPT:

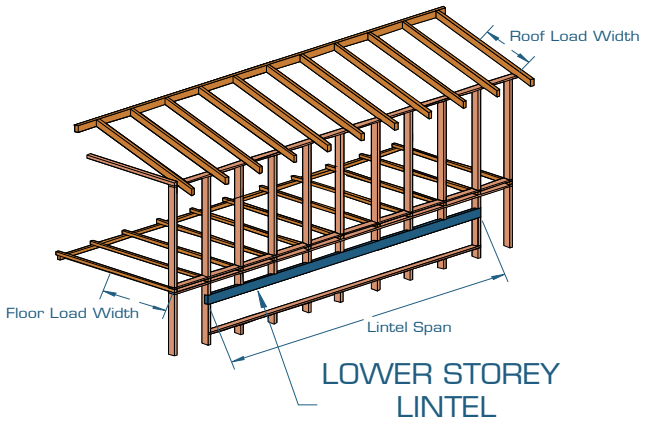
SmartLam GL17 - 295 x 65
(additional 5 mm bearing length required)

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/Truss Spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Lintel span (mm) Single span									
130x65	40	2900	2800	2000	1800	1600	1200	1400	NS	1250	NS
	90	2750	2800	2150	2000	1700	1300	1450	NS	1300	NS
165x65	40	3750	3550	2600	2550	2100	1950	1750	1450_{5}	1550	NS
	90	3350	3300	2750	2650	2250	2100	1850	1600_{5}	1650_{5}	1250_{5}
195x65	40	4400	4350	3100	2950	2550	2400	2150_{5}	2050_{5}	1900	1600_{10}
	90	3850	3850	3200	3100	2650	2550_{5}	2300_{5}	2150_{10}	2000_{5}	1700_{15}
230x65	40	5200	5150	3700	3500	2950	2850_{5}	2600_{5}	2500_{10}	2300_{10}	2200_{15}
	90	4450	4450	3650	3650	3100_{5}	3000_{10}	2700_{10}	2650_{20}	2450_{20}	2300_{25}
260x65	40	5900	5800	4150	4050	3400_{5}	3200_{5}	2900_{10}	2800_{20}	2600_{15}	2500_{20}
	90	4950	4950	4050_{5}	4050_{10}	3550_{15}	3400_{15}	3050_{15}	2950_{30}	2700_{20}	2650_{35}
295x65	40	6700	6650	4750	4700	3850_{5}	3700_{10}	3300_{10}	3150_{15}	2950_{25}	2850_{35}
	90	5550	5550	4550	4550_{5}	4000_{15}	3900_{15}	3500_{30}	3300_{25}	3100_{30}	2950_{45}
330x65	40	7450	7450	5250	5200_{5}	4250_{15}	4150_{20}	3700_{20}	3500_{15}	3300_{20}	3150_{30}
	90	6200	6150	5050_{5}	5000_{10}	4500_{20}	4400_{25}	3850_{30}	3700_{30}	3450_{30}	3300_{40}
360x65	40	8100	8050	5700_{5}	5600_{10}	4650_{10}	4600_{15}	4000_{20}	3850_{20}	3600_{35}	3400_{30}
	90	6750	6750	5450_{15}	5450_{20}	4850_{30}	4800_{35}	4200_{40}	4100_{35}	3750_{45}	3600_{40}
395x65	40	8800	8750	6200_{10}	6100_{10}	5050_{20}	5000_{20}	4350_{30}	4300_{40}	3900_{30}	3750_{30}
	90	7400	7350	5950_{10}	5900_{15}	5250_{25}	5250_{35}	4600_{35}	4550_{45}	4050_{45}	3950_{45}
425x65	40	9450	9450	6650_{15}	6550_{10}	5400_{15}	5350_{20}	4700_{25}	4650_{35}	4150_{30}	4050_{35}
	90	7950	7950_{5}	6400_{15}	6350_{20}	5650_{35}	5600_{45}	4900_{50}	4900_{55}	4350_{60}	4300_{75}
460x65	40	10150	10150	7150_{15}	7100_{20}	5800_{25}	5700_{35}	5050_{40}	5000_{40}	4500_{45}	4450_{55}
	90	8650_{5}	8600	6900_{25}	6900_{30}	6100_{45}	6000_{40}	5250_{50}	5200_{55}	4700_{55}	4650_{70}
495x65	40	10900_{5}	10800_{5}	7650_{20}	7600_{20}	6200_{35}	6150_{30}	5350_{35}	5300_{40}	4800_{50}	4750_{55}
	90	9350_{5}	9350_{10}	7450_{30}	7400_{30}	6500_{45}	6450_{40}	5650_{65}	5550_{75}	5050_{75}	5000_{75}
130x85	40	3350	3200	2350	2250	1850	1550	1600	1150	1400	NS
	90	2950	2950	2400	2350	1950	1750	1650	1300	1500	1050
165x85	40	4250	4150	3000	2900	2450	2300	2050	1900	1800	1500
	90	3600	3550	3000	3000	2550	2450	2200	2100	1900	1650_{5}
195x85	40	5050	5050	3600	3400	2850	2800	2500	2400	2200	2150_{5}
	90	4150	4150	3450	3400	3000	2900	2600	2550_{5}	2350_{5}	2200_{10}
230x85	40	6000	5900	4200	4100	3450	3250	2950	2850_{5}	2650	2550_{10}
	90	4800	4800	3950	3950	3550	3400_{5}	3100_{5}	2950_{15}	2750_{20}	2700_{15}
260x85	40	6750	6750	4750	4700	3850	3700	3350	3200_{5}	2950_{10}	2850_{20}
	90	5350	5350	4400	4400	3900_{5}	3900_{5}	3500_{15}	3350_{15}	3100_{15}	3000_{25}
295x85	40	7600	7650	5400	5350	4400	4350_{5}	3800_{5}	3650_{10}	3400_{5}	3250_{15}
	90	6000	6000	4900	4900	4400_{5}	4350_{10}	4000_{15}	3850_{15}	3550_{25}	3400_{25}
330x85	40	8550	8500	6000	5900	4900_{5}	4850_{10}	4200_{15}	4100_{20}	3800_{15}	3600_{15}
	90	6700	6700	5450_{5}	5450_{5}	4850_{15}	4800_{20}	4450_{20}	4350_{30}	3950_{25}	3800_{30}
360x85	40	9300	9250	6500	6450	5300_{5}	5250_{10}	4600_{10}	4550_{20}	4100_{15}	3950_{20}
	90	7300	7300	5950_{5}	5900_{5}	5250_{15}	5250_{20}	4800_{30}	4800_{35}	4300_{35}	4200_{50}
395x85	40	10100	10100	7100	7100_{5}	5800_{10}	5700_{15}	5000_{20}	5000_{25}	4450_{25}	4400_{35}
	90	8000	8000	6450_{5}	6450_{5}	5700_{20}	5700_{25}	5250_{30}	5200_{35}	4700_{30}	4700_{40}
425x85	40	10850	10800	7600_{5}	7550_{5}	6200_{15}	6100_{15}	5350_{20}	5300_{25}	4800_{30}	4800_{35}
	90	8650	8650	6950_{10}	6950_{15}	6150_{25}	6100_{25}	5600_{40}	5500_{50}	5000_{45}	5000_{50}
460x85	40	11650	11650	8200_{10}	8100_{15}	6650_{15}	6600_{15}	5750_{25}	5650_{35}	5150_{35}	5100_{35}
	90	9400	9400	7500_{15}	7500_{15}	6600_{25}	6600_{25}	6050_{40}	5950_{45}	5400_{45}	5300_{50}
495x85	40	12000	12000	8750_{15}	8700_{10}	7150_{20}	7100_{25}	6150_{35}	6050_{30}	5500_{30}	5400_{35}
	90	10200	10200	8100_{20}	8100_{25}	7100_{30}	7100_{35}	6450_{45}	6400_{40}	5750_{55}	5700_{70}
525x85	40	12000	12000	9250_{20}	9200_{20}	7500_{30}	7500_{25}	6500_{35}	6450_{30}	5800_{45}	5700_{55}
	90	10950_{5}	10900_{5}	8650_{25}	8600_{20}	7550_{40}	7550_{40}	6800_{55}	6800_{65}	6100_{60}	6000_{65}
560x85	40	8000	8050	9800_{15}	9800_{20}	8000_{25}	7950_{25}	6900_{45}	6900_{50}	6150_{45}	6050_{50}
	90	11700_{5}	11750_{10}	9250_{30}	9300_{30}	8050_{45}	8050_{50}	7250_{55}	7200_{60}	6450_{65}	6400_{80}
590x85	40	7650	7650	10300_{20}	10250_{20}	8400_{30}	8300_{40}	7250_{40}	7200_{45}	6450_{55}	6400_{45}
	90	12000_{5}	12000_{5}	9800_{25}	9800_{30}	8550_{45}	8500_{50}	7600_{65}	7550_{60}	6800_{85}	6750_{60}

NOTES:

1) D = member depth, B = member breadth, NS = not suitable.
2) Minimum bearing length = 35 mm at end supports. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm.
3) Restraint value for slenderness calculations is 600 mm.
4) Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE SPAN LINTELS IN LOWER STOREY WALLS
AS 4055 CLASSIFICATION N1, N2, N3 & C1



LOWER STOREY LINTEL

EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
lintel span = 3500 mm
roof load width = 3900 mm
floor load width = 1200 mm
Enter span table at 4500 roof load width column, floor load width 1200 mm, and read down to a span equal to or greater than 3500 mm

ADOPT:

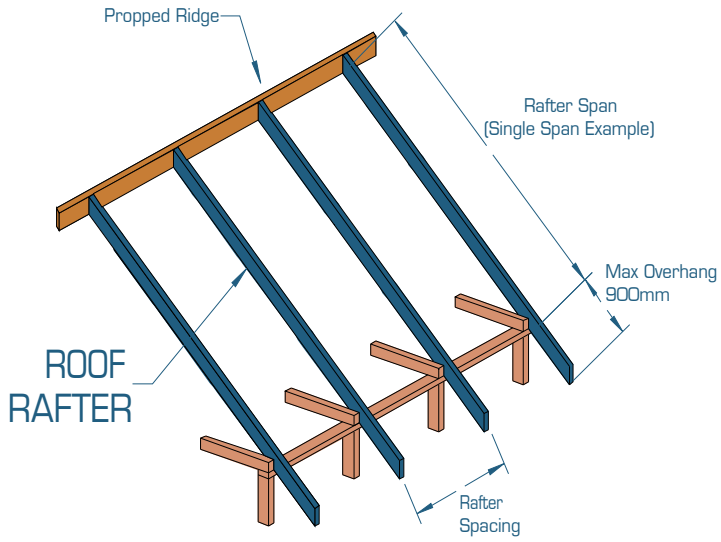
SmartLam GL17 - 260 x 65

Roof load width (mm)		1500			3000			4500			6000		
Floor load width (mm)		1200	2400	3600	1200	2400	3600	1200	2400	3600	1200	2400	3600
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Lintel span (mm)											
		Single span											
130x65	40	2400	2050	1850	2200	1950	1750	2050	1850	1700	1950	1750	1650
	90	2150	1900	1750	1900	1750	1600	1700	1600	1500	1600	1500	1450
165x65	40	2950	2650	2350	2800	2500	2250	2650	2350	2150	2500	2250	2100
	90	2750	2450	2250	2400	2200	2050	2200	2050	1950	2050	1950	1850
195x65	40	3400	3000	2750	3200	2900	2700	3000	2800	2600	2900	2700	2500
	90	3150	2850	2650	2850	2650	2450	2600	2450	2300_{5}	2450	2300_{5}	2200_{5}
230x65	40	3900	3450	3150_{5}	3650	3300	3050_{5}	3450	3200	3000_{5}	3300	3100	2900_{5}
	90	3600	3300	3050_{5}	3250	3050	2850_{5}	3000	2850_{5}	2750_{10}	2850_{5}	2700_{10}	2600_{15}
260x65	40	4350	3850	3500_{5}	4050	3650	3400_{10}	3850	3550	3300_{10}	3650	3400	3200_{10}
	90	4000	3650	3350_{10}	3600	3350	3150_{10}	3350_{5}	3150_{10}	3000_{15}	3150_{10}	3000_{15}	2900_{20}
295x65	40	4900	4300	3900_{10}	4550	4100	3800_{10}	4300	3950_{5}	3650_{15}	4100	3800_{5}	3550_{15}
	90	4450	4050_{5}	3750_{10}	4000	3750_{5}	3500_{15}	3700_{5}	3500_{15}	3350_{20}	3500_{15}	3350_{20}	3200_{25}
330x65	40	5400	4750_{5}	4300_{15}	5000	4500_{5}	4150_{15}	4750	4350_{5}	4050_{20}	4500	4200_{10}	3950_{20}
	90	4950	4450_{5}	4150_{15}	4400_{5}	4100_{10}	3900_{20}	4100_{10}	3850_{20}	3700_{25}	3850_{20}	3650_{25}	3550_{30}
360x65	40	5850	5100_{5}	4650_{20}	5450	4900_{10}	4500_{20}	5100	4700_{10}	4350_{20}	4900_{5}	4500_{10}	4250_{25}
	90	5350	4850_{10}	4450_{20}	4800_{5}	4450_{15}	4200_{25}	4400_{15}	4150_{20}	3950_{30}	4150_{25}	3950_{30}	3800_{35}
395x65	40	6400	5600_{10}	5050_{25}	5950	5300_{15}	4900_{25}	5600_{5}	5100_{15}	4750_{25}	5300_{10}	4900_{15}	4600_{30}
	90	5850	5250_{15}	4850_{25}	5200_{10}	4800_{20}	4550_{30}	4800_{20}	4500_{25}	4300_{35}	4500_{25}	4300_{35}	4100_{40}
425x65	40	6900	6000_{15}	5400_{30}	6350	5700_{15}	5200_{30}	6000_{5}	5450_{20}	5050_{30}	5700_{10}	5250_{20}	4900_{35}
	90	6250_{5}	5600_{15}	5200_{30}	5550_{15}	5150_{20}	4850_{35}	5100_{25}	4850_{30}	4600_{40}	4800_{30}	4600_{40}	4400_{45}
460x65	40	7450	6450_{20}	5850_{35}	6900_{5}	6150_{20}	5600_{35}	6450_{10}	5850_{20}	5450_{35}	6150_{15}	5650_{25}	5300_{40}
	90	6750_{5}	6050_{20}	5550_{35}	6000_{15}	5550_{25}	5200_{40}	5500_{25}	5200_{35}	4950_{45}	5150_{35}	4900_{45}	4700_{50}
495x65	40	8050_{5}	6950_{20}	6250_{40}	7400_{10}	6600_{25}	6050_{40}	6950_{15}	6300_{25}	5800_{40}	6600_{20}	6050_{30}	5650_{45}
	90	7300_{10}	6500_{25}	5950_{40}	6450_{20}	5950_{30}	5550_{45}	5900_{30}	5550_{40}	5250_{50}	5500_{40}	5250_{50}	5050_{60}
130x85	40	2600	2250	2000	2400	2100	1900	2250	2000	1850	2100	1950	1800
	90	2350	2100	1900	2050	1900	1750	1900	1750	1650	1750	1650	1550
165x85	40	3200	2850	2600	3000	2700	2450	2850	2600	2400	2700	2500	2300
	90	2950	2700	2450	2650	2450	2250	2400	2250	2100	2250	2100	2000
195x85	40	3650	3250	3000	3450	3100	2900	3250	3000	2800	3100	2900	2750
	90	3400	3100	2850	3050	2850	2700	2850	2700	2550	2650	2500	2400
230x85	40	4250	3750	3400	3950	3550	3300	3750	3450	3200	3550	3300	3100
	90	3900	3550	3300	3500	3250	3100	3250	3050	2950	3050	2950	2800_{5}
260x85	40	4700	4150	3800	4400	3950	3650	4150	3800	3550	3950	3700	3450_{5}
	90	4300	3900	3650	3900	3600	3400_{5}	3600	3400	3250_{5}	3400	3250_{5}	3100_{10}
295x85	40	5250	4650	4200_{5}	4900	4400	4100_{5}	4650	4250	3950_{5}	4400	4100	3850_{5}
	90	4850	4350	4050_{5}	4350	4050	3800_{5}	4000	3800_{5}	3600_{10}	3750_{5}	3600_{10}	3450_{15}
330x85	40	5850	5100	4650_{5}	5450	4900	4500_{10}	5100	4700	4350_{10}	4900	4500	4250_{10}
	90	5350	4850	4450_{10}	4800	4450_{5}	4200_{10}	4400_{5}	4150_{10}	3950_{15}	4150_{10}	3950_{15}	3800_{20}
360x85	40	6350	5550	5050_{10}	5900	5300	4850_{10}	5550	5050_{5}	4700_{15}	5300	4900_{5}	4600_{15}
	90	5800	5200	4800_{10}	5150	4800_{5}	4500_{15}	4750_{5}	4500_{15}	4300_{20}	4450_{15}	4250_{20}	4100_{25}
395x85	40	6950	6050_{5}	5500_{15}	6450	5750_{5}	5300_{15}	6050	5500_{5}	5100_{15}	5750	5300_{10}	4950_{20}
	90	6350	5700_{5}	5250_{15}	5650_{5}	5200_{10}	4900_{20}	5200_{10}	4900_{15}	4650_{25}	4850_{15}	4650_{25}	4450_{30}
425x85	40	7500	6500_{5}	5900_{20}	6900	6200_{10}	5650_{20}	6500	5900_{10}	5500_{20}	6200_{5}	5700_{10}	5300_{20}
	90	6800	6100_{10}	5600_{20}	6050_{5}	5600_{15}	5250_{25}	5550_{15}	5250_{20}	4950_{25}	5200_{20}	4950_{25}	4750_{35}
460x85	40	8100	7050_{10}	6350_{20}	7500	6650_{10}	6100_{25}	7050_{5}	6400_{15}	5900_{25}	6650_{5}	6150_{15}	5750_{25}
	90	7350	6600_{10}	6050_{25}	6500_{10}	6050_{15}	5650_{25}	6000_{20}	5650_{25}	5350_{30}	5600_{25}	5300_{30}	5100_{40}
495x85	40	8750	7550_{15}	6800_{25}	8100	7200_{15}	6550_{25}	7600_{5}	6850_{15}	6350_{30}	7200_{10}	6600_{20}	6150_{30}
	90	7950_{5}	7100_{15}	6500_{30}	7000_{15}	6450_{20}	6050_{30}	6400_{20}	6050_{30}	5700_{35}	6000_{30}	5700_{35}	5450_{45}
525x85	40	9350	8050_{15}	7250_{30}	8600_{5}	7600_{20}	6950_{30}	8050_{10}	7300_{20}	6700_{35}	7600_{15}	7000_{20}	6500_{35}
	90	8450_{5}	7550_{20}	6900_{30}	7450_{15}	6850_{25}	6400_{35}	6800_{25}	6400_{30}	6050_{40}	6350_{35}	6050_{40}	5750_{50}
560x85	40	10050_{5}	8600_{20}	7750_{35}	9200_{5}	8150_{20}	7400_{35}	8600_{10}	7750_{25}	7150_{35}	8150_{15}	7450_{25}	6950_{40}
	90	9050_{10}	8050_{20}	7350_{35}	7950_{20}	7300_{30}	6850_{40}	7250_{30}	6800_{35}	6450_{45}	6750_{40}	6400_{45}	6150_{55}
590x85	40	10650_{5}	9100_{25}	8150_{40}	9750_{10}	8600_{25}	7850_{40}	9100_{15}	8200_{25}	7550_{40}	8600_{20}	7850_{30}	7300_{45}
	90	9600_{10}	8500_{25}	7750_{40}	8400_{20}	7750_{30}	7200_{45}	7650_{30}	7200_{40}	6800_{50}	7150_{40}	6750_{50}	6450_{55}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. Total upper floor mass of 40 (kg/m^2), floor live load of 1.5 (kPa), floor point load of 1.8 (kN).
3. Minimum bearing length = 35 mm at end supports. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm.
4. Restraint value for slenderness calculations is 600 mm.
5. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE/CONTINUOUS SPAN ROOF RAFTER WITH CEILING ATTACHED - AS 4055 CLASSIFICATION N1, N2 AND N3



EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
rafter span = 5800 mm
Enter span table at rafter spacing of 600 mm, and read down to a span equal to or greater than 5800 mm

ADOPT:
SmartLam GL17 - 165 x 65

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Roof load width (mm)		450	600	900	1200	450	600	900	1200
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Rafter span (mm)							
		Single span				Continuous span			
130x65	30	5400	5300	4750	4300	6800	6450	5900	5300
	40	5350	4900	4300	3950	6400	6050	5400	4950
	75	4400	4000	3500	3200	5500	5050	4500	4100
	90	4150	3800	3300	3000	5250	4800	4250	3850
165x65	30	7050	6600	6050	5500	8000	7600	7000	6600
	40	6600	6200	5550	5050	7600	7150	6600	6200
	75	5650	5150	4500	4100	6700	6300	5650	5150
	90	5350	4850	4250	3850	6450	6050	5350	4900
195x65	30	8100	7600	6950	6450	8900	8500	7850	7400
	40	7600	7100	6450	6000	8500	8050	7400	7000
	75	6550	6100	5400	4900	7500	7100	6500	6050
	90	6300	5800	5100	4600	7250	6800	6200	5750
230x65	30	9300	8750	7950	7450	9950	9500	8800	8350
	40	8750	8200	7450	6900	9500	9000	8350	7850
	75	7550	7050	6350	5850	8450	7950	7300	6850
	90	7200	6700	6050	5500	8150	7650	7000	6550
260x65	30	10300	9700	8850	8250	10750	10300	9600	9100
	40	9700	9100	8250	7700	10300	9800	9100	8550
	75	8400	7800	7050	6500	9200	8700	7950	7500
	90	8050	7450	6700	6200	8900	8350	7650	7150
295x65	30	11550	10900	9950	9250	11700	11200	10450	9900
	40	10900	10200	9250	8600	11200	10700	9900	9350
	75	9400	8750	7850	7250	10050	9500	8750	8200
	90	9000	8350	7500	6900	9700	9150	8400	7850
330x65	30	12000	12000	11000	10250	12000	12000	11300	10700
	40	12000	11300	10250	9500	12000	11500	10700	10150
	75	10400	9700	8700	8050	10850	10250	9450	8900
	90	9950	9250	8250	7650	10500	9900	9100	8550
360x65	30	12000	12000	11950	11150	12000	12000	11950	11350
	40	12000	12000	11150	10350	12000	12000	11350	10750
	75	11300	10500	9400	8700	11500	10900	10050	9450
	90	10800	10000	8950	8250	11150	10500	9650	9100_{5}
395x65	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	11300	12000	12000	12000	11500
	75	12000	11500	10300	9500	12000	11650	10750	10100_{5}
	90	11800	10950	9750	9000	11850	11250	10350	9700_{5}
425x65	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	75	12000	12000	11050	10150	12000	12000	11300	10650_{5}
	90	12000	11750	10500	9650	12000	11800	10900	10250_{10}
460x65	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000_{5}
	75	12000	12000	11950	11000	12000	12000	11950	11250_{10}
	90	12000	12000	11300	10400	12000	12000	11500_{5}	10850_{15}
495x65	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000_{5}
	75	12000	12000	12000	11800	12000	12000	12000	11850_{15}
	90	12000	12000	12000	11200	12000	12000	12000_{5}	11400_{20}

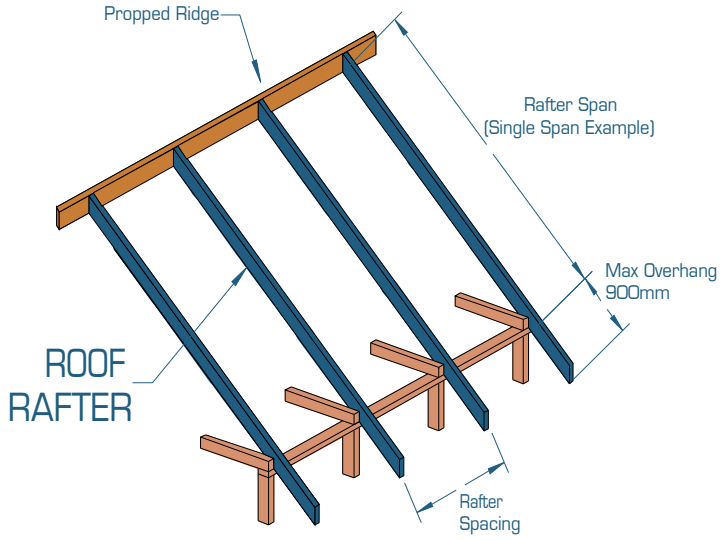
SINGLE/CONTINUOUS SPAN ROOF RAFTER WITH CEILING ATTACHED - AS 4055 CLASSIFICATION N1, N2 AND N3 [Cont'd]

Roof load width (mm)		450	600	900	1200	450	600	900	1200
Member size DxB (mm)	Roof mass (kg/m²)	Maximum Rafter span (mm)							
		Single span				Continuous span			
130x85	30	6100	5750	5100	4700	7100	6750	6250	5850
	40	5750	5300	4700	4300	6750	6400	5850	5400
	75	4800	4400	3850	3500	5950	5500	4850	4450
	90	4550	4150	3650	3300	5650	5200	4600	4200
165x85	30	7450	7000	6400	6000	8350	7950	7400	6950
	40	7000	6600	6000	5500	7950	7550	6950	6550
	75	6100	5600	4950	4500	7050	6650	6100	5600
	90	5800	5300	4650	4250	6800	6400	5800	5300
195x85	30	8500	8050	7350	6900	9300	8900	8300	7850
	40	8050	7550	6900	6450	8900	8450	7850	7400
	75	7000	6550	5900	5350	7950	7500	6850	6450
	90	6700	6250	5550	5050	7650	7200	6600	6200
230x85	30	9750	9250	8500	7950	10350	9900	9250	8800
	40	9250	8700	7950	7400	9900	9450	8800	8300
	75	8050	7500	6800	6300	8900	8400	7750	7250
	90	7700	7200	6500	6000	8600	8100	7450	6950
260x85	30	10850	10300	9450	8800	11150	10750	10050	9550
	40	10300	9700	8800	8250	10750	10250	9550	9050
	75	8950	8350	7550	7000	9700	9150	8450	7950
	90	8600	8000	7200	6650	9350	8850	8100	7600
295x85	30	12000	11500	10550	9900	12000	11650	10950	10450
	40	11500	10850	9900	9200	11650	11150	10450	9900
	75	10050	9350	8450	7800	10550	10000	9250	8700
	90	9600	8950	8050	7450	10200	9650	8900	8350
330x85	30	12000	12000	11700	10950	12000	12000	11800	11250
	40	12000	12000	10950	10200	12000	12000	11250	10700
	75	11100	10350	9350	8650	11350	10800	10000	9400
	90	10650	9900	8900	8250	11000	10450	9600	9050
360x85	30	12000	12000	12000	11900	12000	12000	12000	11900
	40	12000	12000	11900	11050	12000	12000	11900	11350
	75	12000	11250	10150	9350	12000	11450	10600	10000
	90	11550	10750	9650	8900	11700	11100	10250	9650
395x85	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	75	12000	12000	11050	10200	12000	12000	11350	10700
	90	12000	11750	10550	9700	12000	11800	10950	10300
425x85	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	75	12000	12000	11900	10950	12000	12000	11900	11250
	90	12000	12000	11300	10400	12000	12000	11500	10850
460x85	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	75	12000	12000	12000	11850	12000	12000	12000	11900
	90	12000	12000	12000	11250	12000	12000	12000	11450_{5}
495x85	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	75	12000	12000	12000	12000	12000	12000	12000	12000
	90	12000	12000	12000	12000	12000	12000	12000	12000_{10}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a batten spacing of 900 mm
3. Maximum birdsmouth depth = 30 % of rafter depth
4. End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports
5. Construction loads shall not be applied to overhangs until a 190x19 (minimum) timber fascia or other fascia of equivalent stiffness is rigidly and permanently attached to the end of rafter overhangs
6. rafter spacing up to 1200 mm
7. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE/CONTINUOUS SPAN ROOF RAFTER WITH CEILING ATTACHED - AS 4055 CLASSIFICATION C1, C2 AND C3



EXAMPLE:

wind speed = C3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
rafter span = 5800 mm
Enter span table at rafter spacing of 600 mm, and read down to a span equal to or greater than 5800 mm

ADOPT:

SmartLam GL17 - 165 x 65

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Roof load width (mm)		450	600	900	1200	450	600	900	1200
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Rafter span (mm)							
		Single span				Continuous span			
130x65	30	5300	4800	4050	3400	5950	5100	4050	3400
	40	5300	4800	4100	3450	6000	5150	4100	3450
	75	4400	4000	3500	3200	5500	5050	4250	3550
	90	4150	3800	3300	3000	5250	4800	4250	3600
165x65	30	6700	6100	5200	4400	7600	6500	5200	4400
	40	6600	6100	5250	4450	7600	6600	5250	4450
	75	5650	5150	4500	4100	6700	6300	5450	4600
	90	5350	4850	4250	3850	6450	6050	5350	4700
195x65	30	7950	7200	6200	5250	8900	7750	6200	5250
	40	7600	7100	6250	5300	8500	7800	6250	5300
	75	6550	6100	5400	4900	7500	7100	6500	5500
	90	6300	5800	5100	4600	7250	6800	6200	5600
230x65	30	9300	8500	7350	6250	9950	9200	7350	6250
	40	8750	8200	7450	6350	9500	9000	7450	6350
	75	7550	7050	6350	5850	8450	7950	7300	6550
	90	7200	6700	6050	5500	8150	7650	7000	6550_{5}
260x65	30	10300	9600	8350	7150	10750	10300	8350	7150
	40	9700	9100	8250	7200	10300	9800	8450	7200
	75	8400	7800	7050	6500	9200	8700	7950	7450_{10}
	90	8050	7450	6700	6200	8900	8350	7650	7150_{10}
295x65	30	11550	10900	9550	8150	11700	11200	9550	8150_{5}
	40	10900	10200	9250	8200	11200	10700	9600	8200_{5}
	75	9400	8750	7850	7250	10050	9500	8750	8200_{15}
	90	9000	8350	7500	6900	9700	9150	8400	7850_{15}
330x65	30	12000	12000	10600	9050	12000	12000	10600_{5}	9050_{10}
	40	12000	11300	10250	9150	12000	11500	10700_{5}	9150_{15}
	75	10400	9700	8700	8050	10850	10250	9450_{5}	8900_{20}
	90	9950	9250	8250	7650	10500	9900	9100_{5}	8550_{20}
360x65	30	12000	12000	11550	9850	12000	12000	11550_{10}	9850_{20}
	40	12000	12000	11150	9950	12000	12000	11350_{10}	9950_{20}
	75	11300	10500	9400	8700	11500	10900	10050_{10}	9450_{25}
	90	10800	10000	8950	8250	11150	10500	9650_{10}	9100_{25}
395x65	30	12000	12000	12000	10750	12000	12000	12000_{10}	10750_{25}
	40	12000	12000	12000	10850	12000	12000	12000_{15}	10850_{30}
	75	12000	11500	10300	9500	12000	11650	10750_{15}	10100_{35}
	90	11800	10950	9750	9000	11850	11250	10350_{15}	9700_{35}
425x65	30	12000	12000	12000	11550	12000	12000	12000_{15}	11550_{30}
	40	12000	12000	12000	11650	12000	12000	12000_{15}	11650_{35}
	75	12000	12000	11050	10150	12000	12000	11300_{20}	10650_{40}
	90	12000	11750	10500	9650	12000	11800	10900_{20}	10250_{40}
460x65	30	12000	12000	12000	12000	12000	12000	12000_{15}	12000_{35}
	40	12000	12000	12000	12000	12000	12000	12000_{15}	12000_{40}
	75	12000	12000	11950	11000	12000	12000	11950_{25}	11250_{45}
	90	12000	12000	11300	10400	12000	12000	11500_{25}	10850_{45}
495x65	30	12000	12000	12000	12000	12000	12000	12000_{15}	12000_{35}
	40	12000	12000	12000	12000	12000	12000	12000_{15}	12000_{40}
	75	12000	12000	12000	11800_{5}	12000	12000	12000_{25}	11850_{50}
	90	12000	12000	12000	11200_{5}	12000	12000	12000_{30}	11400_{50}

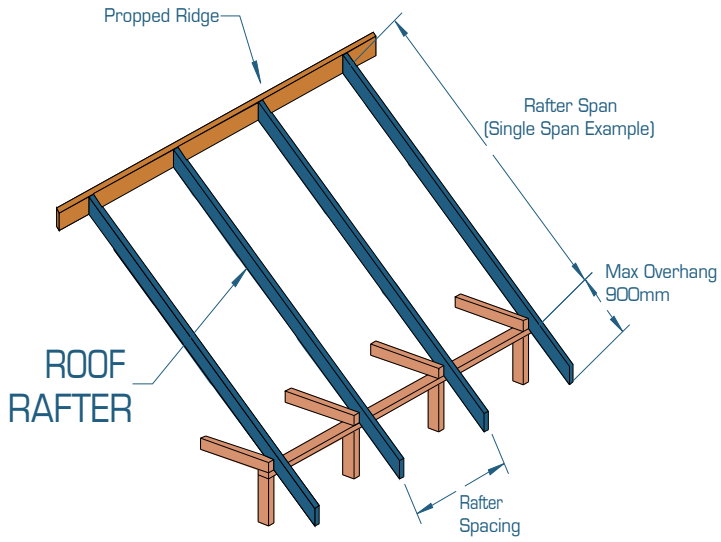
SINGLE/CONTINUOUS SPAN ROOF RAFTER WITH CEILING ATTACHED - AS 4055 CLASSIFICATION C1, C2 AND C3 [Cont'd]

Roof load width (mm)		450	600	900	1200	450	600	900	1200
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Rafter span (mm)							
		Single span				Continuous span			
130x85	30	5800	5250	4600	3950	6850	5850	4700	3950
	40	5750	5250	4600	4000	6750	5900	4700	4000
	75	4800	4400	3850	3500	5950	5500	4850	4100
	90	4550	4150	3650	3300	5650	5200	4600	4200
165x85	30	7350	6650	5850	5100	8350	7500	6000	5100
	40	7000	6600	5850	5150	7950	7550	6050	5150
	75	6100	5600	4950	4500	7050	6650	6100	5300
	90	5800	5300	4650	4250	6800	6400	5800	5300
195x85	30	8500	7900	6900	6100	9300	8900	7150	6100
	40	8050	7550	6900	6150	8900	8450	7200	6150
	75	7000	6550	5900	5350	7950	7500	6850	6350
	90	6700	6250	5550	5050	7650	7200	6600	6200
230x85	30	9750	9250	8100	7250	10350	9900	8500	7250
	40	9250	8700	7950	7300	9900	9450	8550	7300
	75	8050	7500	6800	6300	8900	8400	7750	7250
	90	7700	7200	6500	6000	8600	8100	7450	6950
260x85	30	10850	10300	9200	8200	11150	10750	9650	8200
	40	10300	9700	8800	8250	10750	10250	9550	8300
	75	8950	8350	7550	7000	9700	9150	8450	7950
	90	8600	8000	7200	6650	9350	8850	8100	7600
295x85	30	12000	11500	10400	9350	12000	11650	10950	9350
	40	11500	10850	9900	9200	11650	11150	10450	9450
	75	10050	9350	8450	7800	10550	10000	9250	8700
	90	9600	8950	8050	7450	10200	9650	8900	8350_{5}
330x85	30	12000	12000	11650	10450	12000	12000	11800	10450_{5}
	40	12000	12000	10950	10200	12000	12000	11250	10550_{5}
	75	11100	10350	9350	8650	11350	10800	10000	9400_{5}
	90	10650	9900	8900	8250	11000	10450	9600	9050_{5}
360x85	30	12000	12000	12000	11350	12000	12000	12000	11350_{10}
	40	12000	12000	11900	11050	12000	12000	11900	11350_{10}
	75	12000	11250	10150	9350	12000	11450	10600	10000_{10}
	90	11550	10750	9650	8900	11700	11100	10250	96501_{0}
395x85	30	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	75	12000	12000	11050	10200	12000	12000	11350_{5}	10700_{15}
	90	12000	11750	10550	9700	12000	11800	10950_{5}	10300_{20}
425x85	30	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	75	12000	12000	11900	10950	12000	12000	11900_{5}	11250_{20}
	90	12000	12000	11300	10400	12000	12000	11500_{5}	10850_{20}
460x85	30	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	75	12000	12000	12000	11850	12000	12000	12000_{5}	11900_{25}
	90	12000	12000	12000	11250	12000	12000	12000_{10}	11450_{25}
495x85	30	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{20}
	75	12000	12000	12000	12000	12000	12000	12000_{5}	12000_{25}
	90	12000	12000	12000	12000	12000	12000	12000_{10}	12000_{30}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a batten spacing of 900 mm
3. Maximum birdsmouth depth = 30 % of rafter depth
4. End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports
5. Construction loads shall not be applied to overhangs until a 190x19 (minimum) timber fascia or other fascia of equivalent stiffness is rigidly and permanently attached to the end of rafter overhangs
6. rafter spacing up to 1200 mm
7. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE/CONTINUOUS SPAN ROOF RAFTER WITHOUT CEILING ATTACHED
AS 4055 CLASSIFICATION N1, N2 AND N3



EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
rafter span = 5800 mm
Enter span table at rafter spacing of 600 mm, and read down to a span equal to or greater than 5800 mm

ADOPT:
SmartLam GL17 - 165 x 65

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Roof load width (mm)		450	600	900	1200	450	600	900	1200
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Rafter span (mm)							
		Single span				Continuous span			
130x65	10	5400	5300	4800	4350	6950	6950	6000	5100
	20	5400	5300	4800	4350	6950	6950	6150	5200
	40	5350	4900	4300	3950	6400	6050	5400	4950
	60	4750	4300	3800	3450	5900	5400	4800	4400
165x65	10	7500	6950	6050	5500	9300	9000	7700	6550
	20	7500	6950	6050	5500	8500	8150	7600	6700
	40	6600	6200	5550	5050	7600	7150	6600	6200
	60	6050	5550	4850	4450	7000	6600	6050	5550
195x65	10	9050	8200	7150	6500	10300	10000	9200	7850
	20	8750	8200	7150	6500	9500	9100	8500	8000
	40	7600	7100	6450	6000	8500	8050	7400	7000
	60	6950	6450	5800	5300	7850	7400	6800	6400
230x65	10	10650	9650	8450	7700	11350	11050	10550	9300
	20	10000	9500	8450	7700	10550	10100	9500	9000
	40	8750	8200	7450	6900	9500	9000	8350	7850
	60	7950	7450	6700	6250	8800	8350	7650	7200
260x65	10	12000	10950	9550	8700	12000	11850	11350	10550
	20	11100	10550	9550	8700	11350	10950	10300	9800
	40	9700	9100	8250	7700	10300	9800	9100	8550
	60	8850	8250	7450	6900	9600	9100	8350	7850
295x65	10	12000	12000	10850	9850	12000	12000	12000	11850
	20	12000	11800	10850	9850	12000	11850	11200	10700
	40	10900	10200	9250	8600	11200	10700	9900	9350
	60	9950	9250	8350	7700	10450	9900	9150	8600
330x65	10	12000	12000	12000	11000	12000	12000	12000	12000
	20	12000	12000	12000	11000	12000	12000	12000	11500
	40	12000	11300	10250	9500	12000	11500	10700	10150
	60	11000	10250	9250	8550	11300	10700	9900	9300
360x65	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	11150	10350	12000	12000	11350	10750
	60	11950	11150	10000	9250	11950	11350	10500	9900
395x65	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	11300	12000	12000	12000	11500
	60	12000	12000	10950	10100	12000	12000	11250	10600
425x65	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	60	12000	12000	11750	10850	12000	12000	11800	11150_{5}
460x65	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000_{5}
	60	12000	12000	12000	11700	12000	12000	12000	11800_{10}
495x65	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000_{5}
	60	12000	12000	12000	12000	12000	12000	12000	12000_{10}

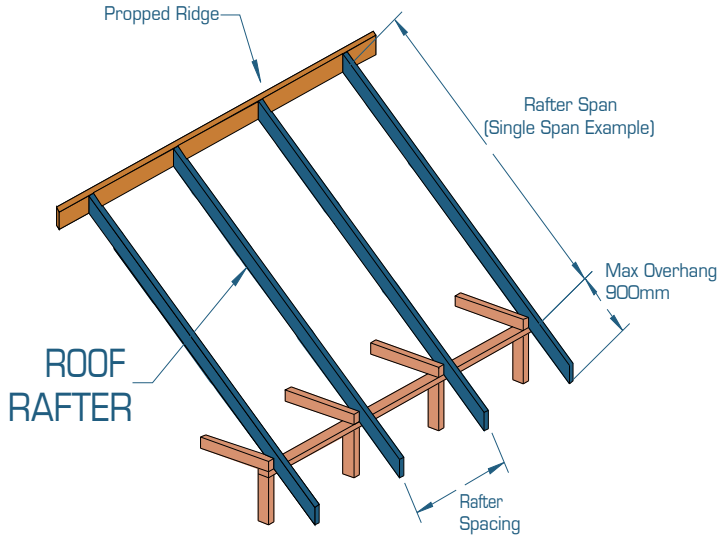
SINGLE/CONTINUOUS SPAN ROOF RAFTER WITHOUT CEILING ATTACHED AS 4055 CLASSIFICATION N1, N2 AND N3 [Cont'd]

Roof load width (mm)		450	600	900	1200	450	600	900	1200
Member size DxB (mm)	Roof mass (kg/m²)	Maximum Rafter span (mm)							
		Single span				Continuous span			
130x85	10	6100	6000	5200	4750	7950	7950	6950	5900
	20	6100	6000	5200	4750	7600	7250	6750	6000
	40	5750	5300	4700	4300	6750	6400	5850	5400
	60	5100	4700	4150	3750	6250	5850	5200	4750
165x85	10	8350	7600	6650	6000	9550	9300	8850	7600
	20	8000	7600	6650	6000	8850	8500	7950	7550
	40	7000	6600	6000	5500	7950	7550	6950	6550
	60	6400	6000	5300	4850	7400	6950	6400	6000
195x85	10	9850	8950	7850	7100	10550	10250	9800	9050
	20	9150	8700	7850	7100	9800	9450	8900	8450
	40	8050	7550	6900	6450	8900	8450	7850	7400
	60	7350	6900	6250	5750	8300	7850	7200	6800
230x85	10	11400	10600	9250	8400	11600	11300	10850	10500
	20	10450	10000	9250	8400	10850	10500	9900	9450
	40	9250	8700	7950	7400	9900	9450	8800	8300
	60	8500	7950	7200	6700	9250	8800	8100	7650
260x85	10	12000	11950	10450	9500	12000	12000	11700	11350
	20	11600	11100	10300	9500	11700	11350	10750	10250
	40	10300	9700	8800	8250	10750	10250	9550	9050
	60	9450	8800	8000	7400	10050	9550	8850	8350
295x85	10	12000	12000	11850	10750	12000	12000	12000	12000
	20	12000	12000	11500	10750	12000	12000	11650	11150
	40	11500	10850	9900	9200	11650	11150	10450	9900
	60	10550	9900	8950	8300	10950	10450	9650	9100
330x85	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	10950	10200	12000	12000	11250	10700
	60	11700	10950	9900	9200	11800	11250	10450	9850
360x85	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	11900	11050	12000	12000	11900	11350
	60	12000	11900	10750	9950	12000	11900	11100	10500
395x85	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	60	12000	12000	11750	10850	12000	12000	11800	11200
425x85	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	60	12000	12000	12000	11700	12000	12000	12000	11750
460x85	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	60	12000	12000	12000	12000	12000	12000	12000	12000
495x85	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	60	12000	12000	12000	12000	12000	12000	12000	12000

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a batten spacing of 900 mm
3. Maximum birdsmouth depth = 30 % of rafter depth
4. End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports
5. Construction loads shall not be applied to overhangs until a 190x19 (minimum) timber fascia or other fascia of equivalent stiffness is rigidly and permanently attached to the end of rafter overhangs
6. rafter spacing up to 1200 mm
7. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE/CONTINUOUS SPAN ROOF RAFTER WITHOUT CEILING ATTACHED
AS 4055 CLASSIFICATION C1, C2 AND C3



EXAMPLE:

wind speed = C3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
rafter span = 5800 mm
Enter span table at rafter spacing of 600 mm, and read down to a span equal to or greater than 5800 mm

ADOPT:

SmartLam GL17 - 165 x 65

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Roof load width (mm)		450	600	900	1200	450	600	900	1200
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Rafter span (mm)							
		Single span				Continuous span			
130x65	10	5300	4800	4000	3350	5850	5000	4000	3350
	20	5300	4800	4000	3350	5900	5050	4000	3350
	40	5300	4800	4100	3450	6000	5150	4100	3450
	60	4750	4300	3800	3450	5900	5250	4200	3500
165x65	10	6700	6100	5100	4350	7500	6400	5100	4350
	20	6700	6100	5150	4350	7550	6450	5150	4350
	40	6600	6100	5250	4450	7600	6600	5250	4450
	60	6050	5550	4850	4450	7000	6600	5350	4550
195x65	10	7950	7200	6100	5150	8850	7600	6100	5150
	20	7950	7200	6150	5200	8950	7700	6150	5200
	40	7600	7100	6250	5300	8500	7800	6250	5300
	60	6950	6450	5800	5300	7850	7400	6400	5400
230x65	10	9350	8500	7250	6150	10500	9000	7250	6150
	20	9350	8500	7300	6200	10550	9100	7300	6200
	40	8750	8200	7450	6350	9500	9000	7450	6350
	60	7950	7450	6700	6250	8800	8350	7600	6450
260x65	10	10600	9600	8200	7000	11900	10250	8200	7000
	20	10600	9600	8300	7050	11350	10300	8300	7050
	40	9700	9100	8250	7200	10300	9800	8450	7200
	60	8850	8250	7450	6900	9600	9100	8350	7350_{5}
295x65	10	12000	10900	9350	8000	12000	11650	9350	8000
	20	12000	10900	9450	8050	12000	11750	9450	8050
	40	10900	10200	9250	8200	11200	10700	9600	8200_{5}
	60	9950	9250	8350	7700	10450	9900	9150	8400_{15}
330x65	10	12000	12000	10450	8900	12000	12000	10450	8900_{5}
	20	12000	12000	10500	9000	12000	12000	10500	9000_{10}
	40	12000	11300	10250	9150	12000	11500	10700_{5}	9150_{15}
	60	11000	10250	9250	8550	11300	10700	9900_{5}	9300_{20}
360x65	10	12000	12000	11300	9700	12000	12000	11300_{5}	9700_{10}
	20	12000	12000	11400	9750	12000	12000	11400_{5}	9750_{15}
	40	12000	12000	11150	9950	12000	12000	11350_{10}	9950_{20}
	60	11950	11150	10000	9250	11950	11350	10500_{10}	9900_{25}
395x65	10	12000	12000	12000	10550	12000	12000	12000_{5}	10550_{20}
	20	12000	12000	12000	10650	12000	12000	12000_{10}	10650_{20}
	40	12000	12000	12000	10850	12000	12000	12000_{15}	10850_{30}
	60	12000	12000	10950	10100	12000	12000	11250_{15}	10600_{30}
425x65	10	12000	12000	12000	11350	12000	12000	12000_{5}	11350_{25}
	20	12000	12000	12000	11450	12000	12000	12000_{10}	11450_{25}
	40	12000	12000	12000	11650	12000	12000	12000_{15}	11650_{35}
	60	12000	12000	11750	10850	12000	12000	11800_{20}	11150_{40}
460x65	10	12000	12000	12000	12000	12000	12000	12000_{10}	12000_{30}
	20	12000	12000	12000	12000	12000	12000	12000_{10}	12000_{30}
	40	12000	12000	12000	12000	12000	12000	12000_{15}	12000_{40}
	60	12000	12000	12000	11700	12000	12000	12000_{20}	11800_{45}
495x65	10	12000	12000	12000	12000	12000	12000	12000_{10}	12000_{30}
	20	12000	12000	12000	12000	12000	12000	12000_{10}	12000_{30}
	40	12000	12000	12000	12000	12000	12000	12000_{15}	12000_{40}
	60	12000	12000	12000	12000_{5}	12000	12000	12000_{20}	12000_{45}

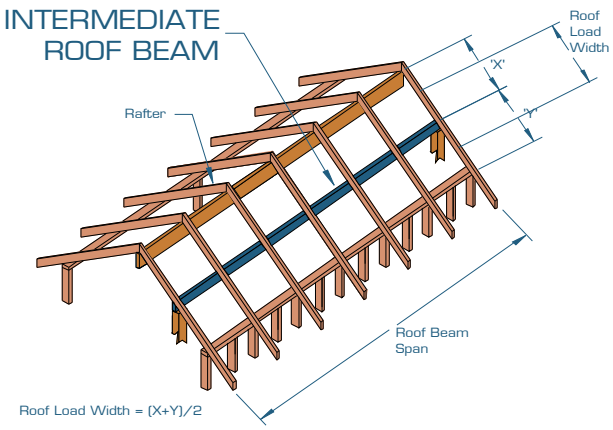
SINGLE/CONTINUOUS SPAN ROOF RAFTER WITHOUT CEILING ATTACHED AS 4055 CLASSIFICATION C1, C2 AND C3 [Cont'd]

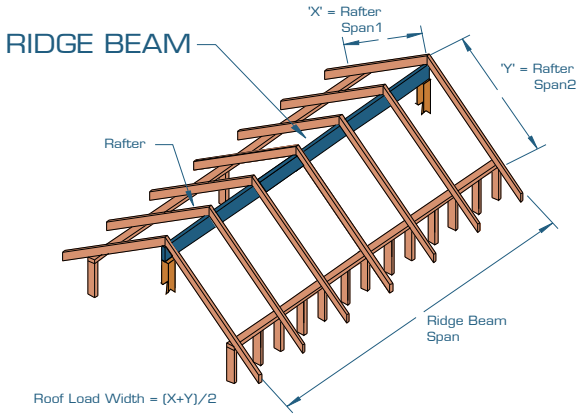
Roof load width (mm)		450	600	900	1200	450	600	900	1200
Member size DxB (mm)	Roof mass (kg/m²)	Maximum Rafter span (mm)							
		Single span				Continuous span			
130x85	10	5800	5250	4600	3850	6750	5750	4600	3850
	20	5800	5250	4600	3900	6800	5800	4650	3900
	40	5750	5250	4600	4000	6750	5900	4700	4000
	60	5100	4700	4150	3750	6250	5850	4800	4050
165x85	10	7350	6650	5850	5000	8600	7350	5900	5000
	20	7350	6650	5850	5050	8650	7450	5950	5050
	40	7000	6600	5850	5150	7950	7550	6050	5150
	60	6400	6000	5300	4850	7400	6950	6200	5250
195x85	10	8700	7900	6900	5950	10200	8750	7000	5950
	20	8700	7900	6900	6000	9800	8850	7100	6000
	40	8050	7550	6900	6150	8900	8450	7200	6150
	60	7350	6900	6250	5750	8300	7850	7200	6250
230x85	10	10250	9300	8100	7100	11600	10350	8350	7100
	20	10250	9300	8100	7150	10850	10450	8400	7150
	40	9250	8700	7950	7300	9900	9450	8550	7300
	60	8500	7950	7200	6700	9250	8800	8100	7450
260x85	10	11550	10500	9200	8050	12000	11750	9450	8050
	20	11550	10500	9200	8150	11700	11350	9550	8150
	40	10300	9700	8800	8250	10750	10250	9550	8300
	60	9450	8800	8000	7400	10050	9550	8850	8350
295x85	10	12000	11950	10400	9200	12000	12000	10750	9200
	20	12000	11950	10400	9300	12000	12000	10850	9300
	40	11500	10850	9900	9200	11650	11150	10450	9450
	60	10550	9900	8950	8300	10950	10450	9650	9100
330x85	10	12000	12000	11650	10250	12000	12000	12000	10250
	20	12000	12000	11650	10350	12000	12000	12000	10350
	40	12000	12000	10950	10200	12000	12000	11250	10550_{5}
	60	11700	10950	9900	9200	11800	11250	10450	9850_{5}
360x85	10	12000	12000	12000	11150	12000	12000	12000	11150_{5}
	20	12000	12000	12000	11250	12000	12000	12000	11250_{5}
	40	12000	12000	11900	11050	12000	12000	11900	11350_{10}
	60	12000	11900	10750	9950	12000	11900	11100	10500_{10}
395x85	10	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	20	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	60	12000	12000	11750	10850	12000	12000	11800_{5}	11200_{15}
425x85	10	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	20	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	60	12000	12000	12000	11700	12000	12000	12000_{5}	11750_{20}
460x85	10	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	20	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	60	12000	12000	12000	12000	12000	12000	12000_{5}	12000_{20}
495x85	10	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	20	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{20}
	60	12000	12000	12000	12000	12000	12000	12000_{5}	12000_{20}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a batten spacing of 900 mm
3. Maximum birdsmouth depth = 30 % of rafter depth
4. End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports
5. Construction loads shall not be applied to overhangs until a 190x19 (minimum) timber fascia or other fascia of equivalent stiffness is rigidly and permanently attached to the end of rafter overhangs
6. rafter spacing up to 1200 mm
7. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE SPAN RIDGE/INTERMEDIATE ROOF BEAM
AS 4055 CLASSIFICATION N1, N2 AND N3





EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
beam span = 4500 mm
X = 2000 mm Y = 3000 mm
roof load width = (X+Y)/2 = 2500 mm

Enter single span table at 3000 roof load width with column and read down to span equal to or greater than 4500 mm

ADOPT:

SmartLam GL17 - 230 x 65 mm

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Roof load width (mm)		1800	3000	4200	5400	6600	7800
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Ridge span (mm)					
		Single span					
130x65	40	3350	2750	2400	2200	2000	1850
	75	2750	2300	2000	1850	1700	1600
165x65	40	4300	3550	3100	2800	2600	2400
	75	3550	2950	2600	2350	2150	2000
195x65	40	5150	4250	3700	3350	3050	2850
	75	4200	3500	3100	2800	2600	2400
230x65	40	6100	5050	4400	4000	3650	3400
	75	5000	4150	3650	3300	3050	2850_{5}
260x65	40	6750	5750	5050	4550	4150	3850
	75	5700	4750	4150	3800	3500_{5}	3250_{10}
295x65	40	7550	6450	5750	5200	4750_{5}	4400_{5}
	75	6450	5450	4750	4350_{5}	4000_{10}	3750_{20}
330x65	40	8350	7150	6400	5850_{5}	5400_{10}	5000_{10}
	75	7100	6100	5400_{5}	4900_{10}	4500_{20}	4200_{25}
360x65	40	9050	7700	6900	6350_{5}	5900_{10}	5500_{15}
	75	7650	6550	5900_{10}	5350_{15}	4950_{25}	4600_{30}
395x65	40	9850	8400	7500	6900_{10}	6400_{15}	6050_{20}
	75	8350	7150	6450_{10}	5950_{20}	5450_{30}	5100_{35}
425x65	40	10550	9000	8000_{5}	7350_{10}	6850_{20}	6450_{25}
	75	8900	7600_{5}	6850_{15}	6350_{25}	5900_{35}	5500_{45}
460x65	40	11400	9700	8650_{10}	7900_{15}	7350_{20}	6900_{30}
	75	9600	8200_{10}	7350_{20}	6800_{30}	6350_{40}	6000_{50}
495x65	40	12000	10400	9250_{10}	8450_{20}	7850_{25}	7400_{35}
	75	10300	8750_{10}	7850_{20}	7250_{35}	6800_{45}	6400_{55}

SINGLE SPAN RIDGE/INTERMEDIATE ROOF BEAM AS 4055 CLASSIFICATION N1, N2 AND N3 [Cont'd]

Roof load width (mm)		1800	3000	4200	5400	6600	7800
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Ridge span (mm)					
		Single span					
130x85	40	3650	3050	2650	2400	2200	2050
	75	3000	2500	2200	2000	1850	1750
165x85	40	4700	3900	3400	3100	2850	2650
	75	3850	3200	2850	2550	2400	2200
195x85	40	5600	4650	4050	3650	3350	3150
	75	4600	3850	3400	3050	2850	2650
230x85	40	6500	5550	4850	4350	4000	3750
	75	5500	4550	4000	3650	3350	3150
260x85	40	7250	6250	5500	5000	4550	4250
	75	6200	5200	4600	4150	3850	3600_{5}
295x85	40	8100	6950	6250	5700	5250	4850
	75	6900	5950	5250	4750	4400_{5}	4100_{10}
330x85	40	8950	7700	6900	6350	5900	5500_{5}
	75	7650	6550	5900	5350_{5}	4950_{10}	4600_{15}
360x85	40	9700	8300	7450	6850	6400_{5}	6000_{10}
	75	8250	7100	6400	5900_{10}	5450_{15}	5100_{20}
395x85	40	10600	9050	8100	7450	6950_{5}	6500_{10}
	75	9000	7700	6950_{5}	6400_{10}	6000_{20}	5600_{25}
425x85	40	11400	9700	8650	7950_{5}	7400_{10}	6950_{15}
	75	9650	8250	7400_{5}	6850_{15}	6400_{25}	6050_{30}
460x85	40	12000	10450	9350	8550_{5}	7950_{15}	7450_{20}
	75	10400	8850	7950_{10}	7350_{20}	6850_{25}	6500_{35}
495x85	40	12000	11250	10000_{5}	9150_{10}	8500_{15}	8000_{25}
	75	11200	9500_{5}	8500_{15}	7850_{25}	7350_{30}	6900_{40}
525x85	40	12000	11950	10600_{5}	9700_{15}	9000_{20}	8450_{25}
	75	11850	10050_{5}	9000_{15}	8300_{25}	7750_{35}	7300_{45}
560x85	40	12000	12000	11300_{10}	10300_{15}	9550_{25}	8950_{30}
	75	12000	10700_{10}	9600_{20}	8800_{30}	8200_{40}	7750_{50}
590x85	40	12000	12000	11950_{10}	10850_{20}	10050_{25}	9400_{35}
	75	12000	11300_{10}	10100_{25}	9250_{35}	8600_{45}	8100_{55}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. rafter spacing up to 1200 mm
4. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

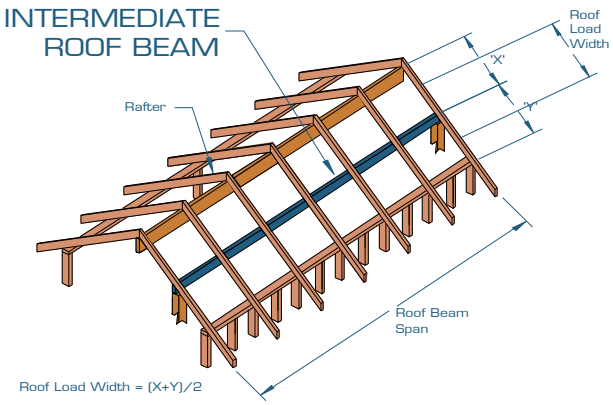
CONTINUOUS SPAN RIDGE/INTERMEDIATE ROOF BEAM AS 4055 CLASSIFICATION N1, N2 AND N3

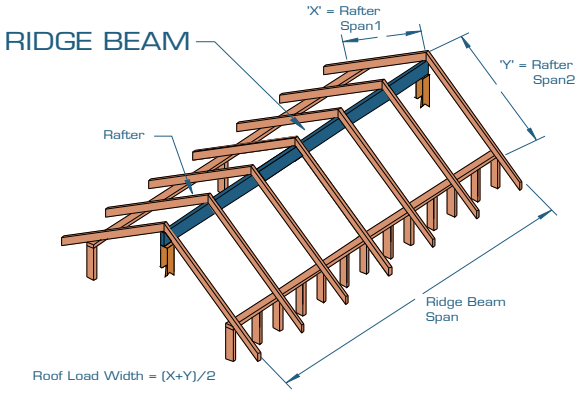
Roof load width (mm)		1800	3000	4200	5400	6600	7800
Member size DxB (mm)	Roof mass (kg/m²)	Maximum Ridge span (mm)					
		Continuous span					
130x65	40	4250	3550	3150	2750	2500	2250
	75	3550	2950	2600	2250	2000	1850
165x65	40	5400	4500	4000	3500	3150	2850
	75	4500	3750	3300	2850	2550	2300
195x65	40	6250	5300	4700	4150	3700	3400
	75	5300	4450	3900	3400	3000_{5}	2750_{15}
230x65	40	7050	6200	5550	4850	4350	4000_{10}
	75	6150	5200	4550	4000_{10}	3550_{20}	3250_{30}
260x65	40	7700	6750	6200	5500	4950_{15}	4500_{20}
	75	6750	5900	5150_{10}	4500_{20}	4000_{35}	3650_{50}
295x65	40	8450	7450	6800	6250_{15}	5600_{25}	5100_{35}
	75	7400	6500	5850_{20}	5100_{35}	4550_{55}	4150_{70}
330x65	40	9150	8050	7350_{5}	6850_{25}	6200_{40}	5650_{50}
	75	8000	7050_{5}	6450_{35}	5650_{50}	5050_{70}	4600_{90}
360x65	40	9750	8600	7850_{10}	7300_{30}	6700_{50}	6150_{65}
	75	8550	7550_{10}	6900_{40}	6100_{65}	5450_{85}	4950_{100}
395x65	40	10400	9200	8400_{20}	7850_{40}	7300_{65}	6650_{80}
	75	9150	8050_{20}	7400_{50}	6650_{80}	5950_{100}	5400_{115}
425x65	40	10950	9700	8850_{25}	8250_{50}	7800_{75}	7150_{90}
	75	9650	8500_{25}	7800_{60}	7100_{95}	6350_{110}	5800_{130}
460x65	40	11600	1025_{05}	9400_{30}	8750_{60}	8250_{85}	7650_{105}
	75	10200	9000_{35}	8250_{75}	7600_{105}	6800_{125}	6200_{145}
495x65	40	12000	10800_{10}	9900_{40}	9250_{70}	8700_{95}	8200_{115}
	75	10750	9500_{40}	8750_{85}	8150_{115}	7300_{140}	6650_{160}
130x85	40	4650	3900	3450	3100	2850	2600
	75	3850	3250	2900	2600	2300	2100
165x85	40	5850	4900	4350	3950	3600	3250
	75	4900	4100	3650	3250	2900	2650
195x85	40	6650	5800	5100	4650	4250	3850
	75	5750	4850	4300	3850	3450	3150
230x85	40	7500	6600	6000	5450	5000	4550
	75	6550	5700	5050	4550	4050_{10}	3700_{15}
260x85	40	8150	7200	6600	6150	5650	5150_{10}
	75	7150	6300	5700	5150_{10}	4600_{20}	4150_{30}
295x85	40	8950	7900	7200	6750	6350_{10}	5850_{20}
	75	7850	6950	6350_{5}	5800_{20}	5200_{35}	4700_{45}
330x85	40	9700	8550	7850	7300_{5}	6900_{20}	6450_{35}
	75	8500	7550	6900_{10}	6450_{35}	5750_{50}	5250_{65}
360x85	40	10300	9150	8350	7800_{10}	7350_{25}	7000_{45}
	75	9100	8000	7350_{20}	6900_{45}	6250_{80}	5650_{80}
395x85	40	11000	9750	8950	8350_{20}	7850_{35}	7500_{55}
	75	9700	8600	7900_{25}	7350_{55}	6750_{80}	6150_{95}
425x85	40	11550	10300	9450_{5}	8800_{25}	8300_{45}	7900_{65}
	75	10250	9050_{5}	8300_{35}	7800_{65}	7250_{90}	6600_{105}
460x85	40	12000	10900	10000_{10}	9350_{30}	8800_{50}	8400_{75}
	75	10850	9600_{15}	8800_{40}	8250_{75}	7750_{100}	7050_{120}
495x85	40	12000	11450	10550_{15}	9850_{35}	9300_{60}	8850_{85}
	75	11400	10100_{20}	9300_{50}	8700_{85}	8250_{115}	7550_{130}
525x85	40	12000	11950	11000_{20}	10250_{45}	9700_{70}	9250_{90}
	75	11900	10550_{25}	9700_{60}	9100_{95}	8600_{120}	7950_{145}
560x85	40	12000	12000	11500_{25}	10750_{50}	10150_{80}	9700_{100}
	75	12000	11050_{30}	10200_{65}	9550_{100}	9050_{130}	8450_{155}
590x85	40	12000	12000	11950_{30}	11200_{55}	10550_{85}	10050_{105}
	75	12000	11500_{35}	10600_{75}	9900_{110}	9400_{140}	8850_{165}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. rafter spacing up to 1200 mm
4. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE SPAN RIDGE/INTERMEDIATE ROOF BEAM
AS 4055 CLASSIFICATION C1, C2 AND C3





EXAMPLE:

wind speed = C3
sheet roof - 40 kg/m^2
beam span = 4500 mm
X = 2000 mm Y = 3000 mm
roof load width = (X+Y)/2 = 2500 mm

Enter single span table at 3000 roof load width with column and read down to span equal to or greater than 4500 mm

ADOPT:
SmartLam GL17 - 295 x 65 mm

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Roof load width (mm)		1800	3000	4200	5400	6600	7800
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Ridge span (mm)					
		Single span					
130x65	40	2700	2100	1750	1550	1400	1300
	75	2750	2150	1850	1600	1450	1350
165x65	40	3450	2650	2250	2000	1800	1650
	75	3550	2750	2350	2050	1850	1700_{5}
195x65	40	4150	3150	2650	2350	2150	1950_{5}
	75	4200	3250	2750	2450	2200_{5}	2050_{10}
230x65	40	4950	3700	3150	2800	2500_{5}	2300_{10}
	75	5000	3850	3250_{5}	2900_{10}	2600_{15}	2400_{15}
260x65	40	5700	4200	3550	3150_{5}	2850_{10}	2650_{15}
	75	5700	4350	3700_{10}	3250_{15}	2950_{20}	2700_{25}
295x65	40	6500	4800	4050_{5}	3550_{10}	3250_{15}	3000_{20}
	75	6450	4950_{5}	4200_{15}	3700_{20}	3350_{25}	3100_{30}
330x65	40	7300	5300_{5}	4500_{10}	3950_{15}	3600_{25}	3300_{30}
	75	7100	5500_{10}	4650_{20}	4100_{25}	3700_{30}	3400_{40}
360x65	40	7950	5750_{5}	4850_{15}	4300_{20}	3900_{30}	3600_{35}
	75	7650_{5}	5950_{15}	5000_{20}	4450_{30}	4000_{35}	3700_{45}
395x65	40	8700_{5}	6300_{10}	5300_{20}	4700_{25}	4250_{35}	3900_{40}
	75	8350_{5}	6550_{20}	5450_{25}	4850_{35}	4400_{45}	4050_{50}
425x65	40	9300_{5}	6800_{15}	5650_{20}	5000_{30}	4550_{40}	4200_{45}
	75	8900_{10}	7050_{20}	5850_{30}	5150_{40}	4700_{50}	4300_{55}
460x65	40	10050_{10}	7350_{20}	6100_{25}	5400_{35}	4850_{45}	4500_{50}
	75	9600_{15}	7650_{25}	6300_{35}	5550_{45}	5050_{55}	4650_{65}
495x65	40	10800_{15}	7950_{25}	6500_{30}	5750_{40}	5200_{50}	4800_{55}
	75	10300_{15}	8250_{30}	6750_{40}	5950_{50}	5400_{60}	4950_{70}

SINGLE SPAN RIDGE/INTERMEDIATE ROOF BEAM AS 4055 CLASSIFICATION C1, C2 AND C3 [Cont'd]

Roof load width (mm)		1800	3000	4200	5400	6600	7800
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Ridge span (mm)					
		Single span					
130x85	40	3100	2400	2050	1800	1600	1500
	75	3000	2500	2100	1850	1700	1550
165x85	40	4000	3050	2600	2300	2050	1900
	75	3850	3150	2650	2350	2150	1950
195x85	40	4800	3600	3050	2700	2450	2250
	75	4600	3750	3150	2800	2550	2350_{5}
230x85	40	5750	4250	3600	3200	2900	2650_{5}
	75	5500	4400	3700	3300_{5}	3000_{5}	2750_{10}
260x85	40	6600	4800	4050	3600	3250_{5}	3000_{10}
	75	6200	5000	4200_{5}	3700_{10}	3350_{10}	3100_{15}
295x85	40	7550	5450	4600	4100_{5}	3700_{10}	3400_{15}
	75	6900	5650	4800_{5}	4200_{15}	3850_{20}	3550_{25}
330x85	40	8400	6100	5150_{5}	4550_{10}	4100_{15}	3800_{20}
	75	7650	6300_{5}	5300_{10}	4700_{20}	4250_{25}	3900_{30}
360x85	40	9150	6650_{5}	5550_{10}	4900_{15}	4450_{20}	4100_{25}
	75	8250	6900_{10}	5750_{15}	5100_{25}	4600_{30}	4250_{35}
395x85	40	10000	7350_{5}	6050_{15}	5350_{20}	4850_{25}	4450_{30}
	75	9000	7600_{15}	6250_{20}	5550_{25}	5000_{35}	4600_{40}
425x85	40	10750	7900_{10}	6500_{15}	5700_{25}	5200_{30}	4800_{35}
	75	9650	8200_{15}	6700_{25}	5900_{30}	5350_{40}	4950_{45}
460x85	40	11600_{5}	8550_{15}	6950_{20}	6150_{25}	5600_{35}	5150_{40}
	75	10400_{5}	8850_{20}	7200_{30}	6350_{35}	5750_{45}	5300_{50}
495x85	40	12000_{5}	9200_{15}	7450_{25}	6600_{30}	5950_{40}	5500_{45}
	75	11200_{10}	9500_{25}	7700_{30}	6800_{40}	6150_{50}	5700_{60}
525x85	40	12000_{5}	9800_{20}	7850_{25}	6950_{35}	6300_{40}	5800_{50}
	75	11850_{10}	10050_{30}	8150_{35}	7200_{45}	6500_{55}	6000_{60}
560x85	40	12000_{5}	10450_{25}	8350_{30}	7400_{40}	6700_{45}	6150_{55}
	75	12000_{10}	10700_{30}	8700_{40}	7650_{50}	6900_{60}	6350_{70}
590x85	40	12000_{5}	11000_{25}	8800_{35}	7750_{40}	7000_{50}	6450_{60}
	75	12000_{10}	11300_{35}	9150_{45}	8000_{55}	7250_{65}	6700_{75}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. rafter spacing up to 1200 mm
4. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

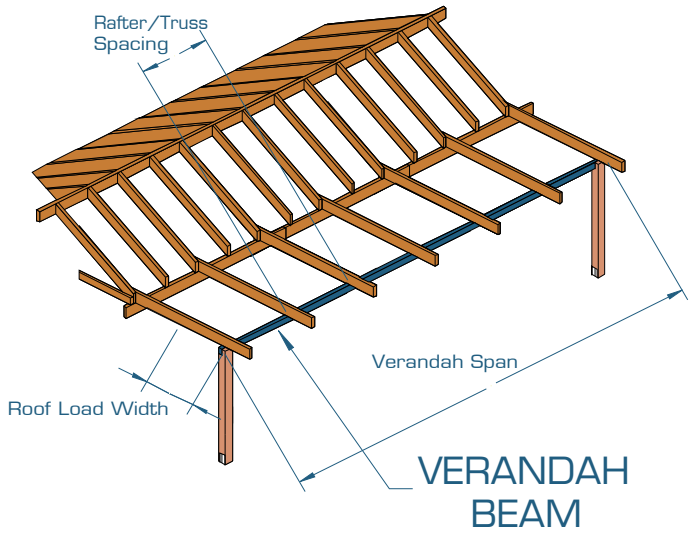
CONTINUOUS SPAN RIDGE/INTERMEDIATE ROOF BEAM AS 4055 CLASSIFICATION C1, C2 AND C3

Roof load width (mm)		1800	3000	4200	5400	6600	7800
Member size DxB (mm)	Roof mass (kg/m²)	Maximum Ridge span (mm)					
		Continuous span					
130x65	40	2700	2100	1750	1550	1400	1300
	75	2800	2150	1850	1600	1450	1350
165x65	40	3450	2650	2250	2000	1800	1650
	75	3550	2750	2350	2050	1850	1700_{10}
195x65	40	4150	3150	2650	2350	2150	1950_{10}
	75	4300	3250	2750	2450_{5}	2200_{15}	2050_{25}
230x65	40	4950	3700	3150	2800_{10}	2500_{20}	2300_{30}
	75	5150	3850	3250_{10}	2900_{25}	2600_{35}	2400_{50}
260x65	40	5700	4200	3550_{5}	3150_{20}	2850_{30}	2650_{45}
	75	5900	4350_{5}	3700_{20}	3250_{35}	2950_{55}	2700_{70}
295x65	40	6500	4800	4050_{20}	3550_{35}	3250_{50}	3000_{65}
	75	6750	4950_{15}	4200_{35}	3700_{55}	3350_{75}	3100_{90}
330x65	40	7300	5300_{10}	4500_{30}	3950_{50}	3600_{65}	3300_{85}
	75	7550_{10}	5500_{30}	4650_{50}	4100_{75}	3700_{95}	3400_{110}
360x65	40	7950	5750_{20}	4850_{40}	4300_{60}	3900_{85}	3600_{100}
	75	8200_{15}	5950_{40}	5000_{65}	4450_{90}	4000_{105}	3700_{125}
395x65	40	8700_{10}	6300_{30}	5300_{55}	4700_{80}	4250_{95}	3900_{110}
	75	9000_{25}	6550_{50}	5450_{80}	4850_{105}	4400_{125}	4050_{140}
425x65	40	9300_{20}	6800_{40}	5650_{65}	5000_{90}	4550_{110}	4200_{125}
	75	9650_{35}	7050_{65}	5850_{90}	5150_{115}	4700_{135}	4300_{155}
460x65	40	10050_{25}	7350_{55}	6100_{80}	5400_{100}	4850_{120}	4500_{140}
	75	10200_{45}	7650_{80}	6300_{105}	5550_{130}	5050_{150}	4650_{170}
495x65	40	10800_{35}	7950_{65}	6500_{90}	5750_{115}	5200_{135}	4800_{155}
	75	10750_{50}	8250_{95}	6750_{115}	5950_{140}	5400_{165}	4950_{190}
130x85	40	3100	2400	2050	1800	1600	1500
	75	3200	2500	2100	1850	1700	1550
165x85	40	4000	3050	2600	2300	2050	1900
	75	4150	3150	2650	2350	2150	1950
195x85	40	4800	3600	3050	2700	2450	2250
	75	5000	3750	3150	2800	2550_{5}	2350_{15}
230x85	40	5750	4250	3600	3200	2900_{5}	2650_{15}
	75	5950	4400	3700	3300_{10}	3000_{20}	2750_{30}
260x85	40	6600	4800	4050	3600_{5}	3250_{15}	3000_{25}
	75	6800	5000	4200_{10}	3700_{20}	3350_{35}	3100_{45}
295x85	40	7550	5450	4600_{5}	4100_{20}	3700_{30}	3400_{45}
	75	7800	5650_{5}	4800_{20}	4200_{35}	3850_{55}	3550_{70}
330x85	40	8400	6100	5150_{15}	4550_{30}	4100_{45}	3800_{60}
	75	8500	6300_{15}	5300_{35}	4700_{50}	4250_{70}	3900_{85}
360x85	40	9150	6650_{10}	5550_{25}	4900_{40}	4450_{80}	4100_{75}
	75	9100	6900_{25}	5750_{45}	5100_{65}	4600_{85}	4250_{100}
395x85	40	10000	7350_{20}	6050_{35}	5350_{55}	4850_{75}	4450_{90}
	75	9700_{10}	7600_{35}	6250_{55}	5550_{80}	5000_{100}	4600_{115}
425x85	40	10750_{5}	7900_{25}	6500_{45}	5700_{65}	5200_{85}	4800_{100}
	75	10250_{15}	8200_{45}	6700_{70}	5900_{90}	5350_{110}	4950_{130}
460x85	40	11600_{15}	8550_{35}	6950_{55}	6150_{80}	5600_{100}	5150_{115}
	75	10850_{20}	8900_{60}	7200_{85}	6350_{105}	5750_{125}	5300_{145}
495x85	40	12000_{20}	9200_{45}	7450_{70}	6600_{90}	5950_{110}	5500_{125}
	75	11400_{25}	9550_{75}	7700_{95}	6800_{115}	6150_{140}	5700_{160}
525x85	40	12000_{20}	9800_{55}	7850_{80}	6950_{100}	6300_{120}	5800_{135}
	75	11900_{30}	10150_{85}	8150_{105}	7200_{130}	6500_{150}	6000_{170}
560x85	40	12000_{20}	10450_{70}	8350_{90}	7400_{110}	6700_{130}	6150_{150}
	75	12000_{30}	10800_{95}	8700_{115}	7650_{140}	6900_{165}	6350_{185}
590x85	40	12000_{20}	11000_{80}	8800_{100}	7750_{120}	7000_{140}	6450_{160}
	75	12000_{30}	11400_{105}	9150_{125}	8000_{150}	7250_{175}	6700_{200}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. rafter spacing up to 1200 mm
4. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE SPAN VERANDAH BEAM
AS 4055 CLASSIFICATION N1, N2 AND N3



EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
verandah span = 3500 mm
roof load width = 3900 mm
Enter span table at 4500 roof load width column, rafter spacing of 600 mm, and read down to a span equal to or greater than 3500 mm

ADOPT:
SmartLam GL17 - 195 x 65

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Verandah span (mm)									
		Single span									
130x65	40	3300	3300	2600	2700	2300	2300	2100	2000	1900	1900
	75	2700	2700	2100	2100	1800	1800	1600	1600	1500	1400
165x65	40	4200	4200	3400	3300	2900	2900	2700	2700	2500	2500
	75	3500	3400	2700	2800	2300	2400	2100	2100	2000	1900
195x65	40	4900	4900	4000	4000	3500	3500	3200	3200	2900	2900
	75	4100	4100	3300	3200	2800	2800	2600	2600	2300	2300
230x65	40	5700	5600	4700	4600	4200	4200	3800	3800	3500	3500
	75	4700	4700	3900	3900	3400	3300	3000	3000	2800_{5}	2800_{10}
260x65	40	6300	6300	5200	5200	4600	4600	4300	4300	4000	4000
	75	5300	5300	4400	4300	3900	3800	3500	3400	3200	3200_{5}
295x65	40	7100	7100	5800	5800	5200	5200	4800	4800	4500	4500
	75	6000	5900	4900	4800	4300	4300	4000_{5}	4000_{5}	3700_{15}	3600_{10}
330x65	40	8000	8000	6500	6500	5800	5700	5300	5300	5000	4900_{5}
	75	6600	6600	5400	5400	4800_{5}	4800_{5}	4400_{5}	4400_{10}	4100_{20}	4100_{25}
360x65	40	8700	8700	7100	7000	6200	6200	5700	5700	5400	5400_{5}
	75	7200	7200	5800	5800	5200_{5}	5200_{5}	4800_{15}	4700_{10}	4500_{15}	4400_{20}
395x65	40	9600	9600	7700	7700	6800	6800	6300	6200	5900	5800_{5}
	75	7900	7900	6400	6400	5600_{5}	5600_{10}	5200_{15}	5200_{20}	4900_{25}	4800_{35}
425x65	40	10300	10300	8400	8300	7300	7300	6700	67005	63005	62005
	75	8500	8500	6800	6800	6000_{10}	6000_{10}	5500_{20}	5500_{25}	5200_{25}	5200_{35}
460x65	40	11300	11300	9000	9100	7900	7900	7300_{5}	7200_{10}	6800_{10}	6800_{15}
	75	9200	9200	7400_{5}	7400_{5}	6500_{10}	6500_{10}	6000_{25}	5900_{20}	5600_{35}	5500_{40}
495x65	40	12000	12000	9800	9800	8600	8600	7800_{5}	7800_{10}	7300_{15}	7200_{20}
	75	10000	10000	8000_{5}	8000_{10}	7000_{15}	7000_{20}	6400_{25}	6400_{20}	6000_{40}	5900_{35}

SINGLE SPAN VERANDAH BEAM
AS 4055 CLASSIFICATION N1, N2 AND N3 [Cont'd]

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/Truss Spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size DxB (mm)	Roof mass (kg/m²)	Maximum Verandah span (mm)									
		Single span									
130x85	40	3700	3600	2900	2900	2500	2600	2300	2300	2100	2100
	75	2900	2900	2300	2300	2000	2000	1800	1800	1700	1600
165x85	40	4500	4500	3700	3700	3200	3200	2900	2900	2700	2700
	75	3800	3800	3000	3000	2600	2700	2300	2300	2200	2100
195x85	40	5200	5300	4400	4300	3900	3800	3500	3500	3200	3200
	75	4400	4400	3600	3500	3100	3100	2800	2800	2600	2600
230x85	40	6100	6100	5000	5100	4500	4500	4100	4100	3900	3800
	75	5100	5100	4200	4200	3700	3700	3400	3300	3100	3100
260x85	40	6800	6800	5600	5600	5000	5000	4600	4600	4300	4300
	75	5700	5700	4700	4700	4200	4200	3800	3800	3500	3500
295x85	40	7700	7700	6300	6300	5600	5600	5200	5200	4800	4800
	75	6400	6400	5300	5300	4700	4700	4300	4300	4000_{5}	4000_{5}
330x85	40	8600	8600	7000	7000	6200	6200	5700	5700	5400	5400
	75	7200	7100	5800	5800	5200	5200	4800_{5}	4700	4500_{5}	4400_{10}
360x85	40	9400	9400	7700	7700	6800	6800	6200	6200	5800	5800
	75	7800	7800	6300	6300	5600	5600	5100_{5}	5100_{10}	4800_{15}	4800_{20}
395x85	40	10400	10300	8400	8400	7400	7400	6800	6800	6300	6300
	75	8600	8600	6900	6900	6100	6100	5600_{5}	5600_{10}	5200_{15}	5200_{20}
425x85	40	11200	11200	9100	9100	8000	8000	7300	7300	6800	6800_{5}
	75	9200	9200	7400	7400	6600	6600	6000_{5}	6000_{10}	5600_{15}	5600_{20}
460x85	40	12000	12000	9900	9800	8700	8600	7900	7900	7400_{5}	7300_{5}
	75	10100	10100	8100	8000	7100_{5}	7100_{5}	6500_{15}	6500_{10}	6100_{25}	6000_{20}
495x85	40	12000	12000	10700	10700	9400	9400	8500	8500	7900_{5}	7900_{5}
	75	10900	10900	8700	8700	7600_{10}	7600_{10}	7000_{15}	6900_{20}	6500_{25}	6500_{20}
525x85	40	12000	12000	11400	11400	10000	10000	9100	9100	8400_{10}	8400_{10}
	75	11600	11600	9300	9300_{5}	8100_{10}	8100_{15}	7400_{20}	7400_{25}	6900_{30}	6900_{35}
560x85	40	8700	8800	12000	12000	10700	10700	9700_{5}	9700_{10}	9000_{10}	9000_{10}
	75	12000	12000	9900_{5}	9900_{5}	8700_{15}	8600_{15}	7900_{20}	7900_{25}	7300_{35}	7300_{40}
590x85	40	8200	8200	12000	12000	11400	11300	10300_{5}	10300_{10}	9500_{15}	9500_{20}
	75	12000	12000	10500_{10}	10500_{10}	9200_{15}	9200_{15}	8300_{25}	8300_{30}	7700_{35}	7700_{40}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. Restraint value for slenderness calculations is 1200 mm
4. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

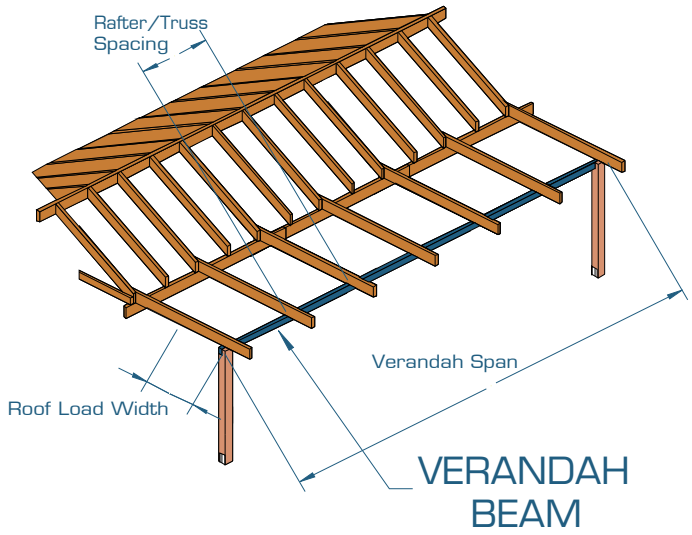
CONTINUOUS SPAN VERANDAH BEAM
AS 4055 CLASSIFICATION N1, N2 AND N3

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/Truss Spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Verandah span (mm)									
		Continuous span									
130x65	40	4100	4100	3300	3300	2900	2900	2600	2600	2400	2500
	75	3400	3300	2700	2700	2300	2300	2100	2100	2000	1900
165x65	40	4900	4900	4200	4200	3700	3700	3300	3300	3000	3000
	75	4200	4200	3400	3400	3000	3000	2700	2700	2500	2500
195x65	40	5500	5500	4700	4700	4300	4300	4000	3900	3600	3500
	75	4800	4800	4000	4000	3500	3500	3200	3200	3000_{5}	3000
230x65	40	6200	6200	5300	5300	4800	4800	4500	4500	4300	4200
	75	5400	5400	4600	4600	4100	4100	3800_{5}	3800	3500_{20}	3500_{15}
260x65	40	6700	6800	5800	5800	5300	5300	4900	4900	4700	4600
	75	5900	5900	5000	5000	4500	4500	4200_{15}	4200_{15}	4000_{35}	4000_{30}
295x65	40	7200	7400	6400	6400	5800	5800	5400	5400	5100	5200
	75	6400	6500	5500	5500	5000_{5}	5000	4700_{25}	4600_{25}	4400_{45}	4400_{45}
330x65	40	7700	8000	6800	6900	6300	6300	5900	5900	5600_{5}	5600_{5}
	75	6900	7000	6000	6000	5400_{10}	5400_{10}	5100_{35}	5100_{35}	4800_{55}	4800_{60}
360x65	40	8100	8600	7200	7400	6700	6700	6300	6300	6000_{10}	6000_{10}
	75	7300	7500	6400	6400	5800_{20}	5800_{20}	5400_{45}	5400_{45}	5100_{70}	5100_{70}
395x65	40	8600	9100	7600	7900	7100	7200	6700	6700	6400_{15}	6400_{15}
	75	7700	8000	6800	6800	6200_{25}	6200_{25}	5800_{55}	5800_{55}	5500_{85}	5500_{85}
425x65	40	9000	9600	7900	8300	7400	7600	7000_{5}	7100_{10}	6700_{20}	6700_{20}
	75	8000	8500	7100	7200	6500_{30}	6500_{30}	6100_{60}	6100_{65}	5800_{90}	5800_{90}
460x65	40	9400	10100	8300	8800	7700	8000	7300_{10}	7500_{15}	7000_{25}	7100_{30}
	75	8400	8900	7400_{5}	7600_{10}	6900_{40}	6900_{40}	6500_{75}	6500_{75}	6100_{100}	6200_{105}
495x65	40	9800	10700	8700	9300	8100	8500	7700_{15}	7900_{20}	7300_{35}	7500_{35}
	75	8800	9400	7700_{10}	8000_{15}	7200_{45}	7300_{50}	6800_{80}	6800_{85}	6500_{110}	6500_{110}
130x85	40	4400	4300	3600	3600	3200	3100	2900	2900	2700	2700
	75	3700	3700	3000	3000	2600	2600	2300	2300	2200	2100
165x85	40	5200	5200	4400	4400	4000	4000	3700	3700	3400	3400
	75	4500	4500	3800	3700	3300	3200	3000	3000	2800	2700
195x85	40	5900	5900	5000	5000	4500	4500	4200	4200	4000	4000
	75	5100	5100	4300	4300	3900	3900	3500	3500	3300	3200
230x85	40	6500	6600	5700	5700	5100	5200	4800	4800	4500	4500
	75	5700	5700	4900	4900	4400	4400	4100	4100	3900	3800
260x85	40	7000	7200	6200	6200	5600	5600	5200	5300	5000	5000
	75	6300	6300	5300	5300	4800	4800	4500	4500	4300_{10}	4300_{10}
295x85	40	7600	7800	6700	6800	6200	6200	5800	5800	5500	5500
	75	6800	6800	5900	5900	5300	5300	5000_{5}	5000_{5}	4700_{20}	4700_{20}
330x85	40	8100	8500	7200	7300	6600	6700	6300	6300	5900	6000
	75	7300	7400	6400	6400	5800	5800	5400_{15}	5400_{15}	5100_{30}	5100_{30}
360x85	40	8500	9000	7500	7800	7000	7100	6600	6700	6300	6300
	75	7600	7900	6700	6800	6200	6200	5800_{20}	5800_{20}	5400_{40}	5400_{35}
395x85	40	9000	9600	8000	8400	7400	7600	7000	7100	6700	6800
	75	8100	8500	7100	7200	6600_{5}	6600_{5}	6200_{30}	6200_{30}	5800_{50}	5900_{50}
425x85	40	9400	10100	8300	8800	7700	8000	7300	7500	7000	7100_{5}
	75	8400	8900	7400	7600	6900_{10}	6900_{10}	6500_{35}	6500_{35}	6200_{55}	6200_{60}
460x85	40	9800	10700	8700	9300	8100	8600	7700	8000	7400_{5}	7600_{10}
	75	8800	9400	7800	8100	7200_{15}	7400_{20}	6800_{40}	6900_{40}	6500_{65}	6500_{65}
495x85	40	10300	11200	9100	9800	8500	9000	8000	8500	7700_{10}	8000_{15}
	75	9200	9900	8100	8600	7600_{20}	7800_{25}	7200_{45}	7300_{50}	6900_{75}	6900_{80}
525x85	40	10700	11700	9400	1020_{0}	8800	9400	8300	8800_{5}	8000_{15}	8400_{20}
	75	9500	10400	8400	8900	7800_{25}	8100_{30}	7400_{50}	7600_{55}	7100_{85}	7200_{85}
560x85	40	11200	12000	9800	1070_{0}	9100	9800	8600_{5}	9200_{10}	8300_{20}	8800_{25}
	75	9900	10800	8800	9400_{5}	8100_{30}	8500_{35}	7700_{60}	8000_{65}	7400_{90}	7600_{95}
590x85	40	11500	12000	10100	11100	9400	1020_{0}	8900_{10}	9600_{15}	8600_{25}	9100_{30}
	75	10300	11300	9000	9700_{10}	8400_{35}	8900_{40}	8000_{65}	8300_{75}	7600_{95}	7900_{100}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. Restraint value for slenderness calculations is 1200 mm
4. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SINGLE SPAN VERANDAH BEAM
AS 4055 CLASSIFICATION C1, C2 AND C3



EXAMPLE:

wind speed = C3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
verandah span = 3500 mm
roof load width = 3900 mm
Enter span table at 4500 roof load width column, rafter spacing of 1200 mm, and read down to a span equal to or greater than 3500 mm

ADOPT:
SmartLam GL17 - 260 x 65

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Verandah span (mm)									
		Single span									
130x65	40	3300	3200	2400	2300	1900	1600	1600	1200	1400	1000
	75	2700	2700	2100	2100	1800	1800	1600	1300	1500	1100
165x65	40	4200	4200	3000	2900	2500	2400	2100	2000	1800	1600
	75	3500	3400	2700	2800	2300	2400	2100	2100	1900	1700
195x65	40	4900	4900	3600	3500	2900	2800	2500	2400	2300	2100
	75	4100	4100	3300	3200	2800	2800	2600	2600	2300_{5}	2200
230x65	40	5700	5600	4300	4200	3500	3300	3000	2900	2700	2600
	75	4700	4700	3900	3900	3400	3300	3000	3000	2800_{5}	2700_{10}
260x65	40	6300	6300	4900	4800	3900	3800	3400	3200	3000	2900_{5}
	75	5300	5300	4400	4300	3900	3800	3500_{5}	3400_{5}	3200_{5}	3000_{10}
295x65	40	7100	7100	5500	5500	4500	4500	3900	3700	3500_{5}	3300
	75	6000	5900	4900	4800	4300	4300_{5}	4000_{5}	3900_{5}	3600_{15}	3500_{10}
330x65	40	8000	8000	6200	6100	5000	5000	4300	4200_{5}	3800_{10}	3700_{5}
	75	6600	6600	5400	5400	4800_{5}	4800_{10}	4400_{10}	4400_{15}	4000_{15}	3900_{15}
360x65	40	8700	8700	6700	6600	5400	5400_{5}	4700	4700_{5}	4200_{10}	4100_{5}
	75	7200	7200	5800	5800	5200_{5}	5200_{10}	4800_{20}	4700_{15}	4400_{20}	4300_{30}
395x65	40	9600	9600	7300	7300	5900	5800_{5}	5100_{10}	5100_{15}	4600_{10}	4500_{15}
	75	7900	7900	6400	6400	5600_{10}	5600_{15}	5200_{20}	5200_{25}	4800_{15}	4800_{40}
425x65	40	1030_{0}	10300	7800	7700	6300_{5}	6200_{5}	5500_{15}	5400_{15}	4900_{20}	4900_{25}
	75	8500	8500	6800	6800_{5}	6000_{15}	6000_{10}	5500_{25}	5500_{30}	5100_{30}	5100_{40}
460x65	40	11300	11300	8400_{5}	8300	6800_{10}	6800_{15}	5900_{10}	5800_{15}	5200_{20}	5200_{25}
	75	9200	9200	7400_{5}	7400_{10}	6500_{15}	6500_{10}	6000_{30}	5900_{25}	5500_{40}	5400_{40}
495x65	40	12000	12000	9000_{5}	8900	7300_{15}	7300_{15}	6300_{20}	6200_{15}	5600_{25}	5500_{25}
	75	10000	10000	8000_{10}	8000_{10}	7000_{20}	7000_{20}	6400_{30}	6400_{25}	5900_{35}	5800_{45}

SINGLE SPAN VERANDAH BEAM
AS 4055 CLASSIFICATION C1, C2 AND C3 [Cont'd]

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/Truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size DxB (mm)	Roof mass (kg/m²)	Maximum Verandah span (mm)									
		Single span									
130x85	40	3700	3600	2700	2700	2200	2100	1900	1600	1600	1300
	75	2900	2900	2300	2300	2000	2000	1800	1800	1700	1400
165x85	40	4500	4500	3500	3300	2800	2700	2500	2300	2200	2100
	75	3800	3800	3000	3000	2600	2700	2300	2300	2200	2100
195x85	40	5200	5300	4100	4000	3400	3200	2900	2800	2600	2500
	75	4400	4400	3600	3500	3100	3100	2800	2800	2600	2600
230x85	40	6100	6100	4900	4900	4000	3900	3500	3300	3100	2900
	75	5100	5100	4200	4200	3700	3700	3400	3300	3100	3100
260x85	40	6800	6800	5600	5500	4500	4500	3900	3800	3500	3300
	75	5700	5700	4700	4700	4200	4200	3800	3800	3500_{5}	3500_{5}
295x85	40	7700	7700	6300	6300	5200	5100	4500	4400	4000	3800
	75	6400	6400	5300	5300	4700	4700	4300	4300_{5}	4000_{10}	4000_{5}
330x85	40	8600	8600	7000	7000	5700	5600	5000	4900_{5}	4400	4400_{5}
	75	7200	7100	5800	5800	5200	5200	4800_{5}	4700_{5}	4500_{5}	4400_{10}
360x85	40	9400	9400	7600	7600	6200	6100	5400	5300_{5}	4800_{5}	4800_{10}
	75	7800	7800	6300	6300	5600	5600	5100_{5}	5100_{10}	4800_{15}	4800_{20}
395x85	40	10400	10300	8300	8300	6800	6700	5900	5800_{5}	5200_{5}	5200_{10}
	75	8600	8600	6900	6900	6100_{5}	6100	5600_{10}	5600_{15}	5200_{15}	5200_{20}
425x85	40	11200	11200	8900	8900	7300	7300_{5}	6300_{5}	6200_{5}	5600_{10}	5500_{15}
	75	9200	9200	7400	7400	6600_{5}	6600_{5}	6000_{5}	6000_{10}	5600_{20}	5600_{25}
460x85	40	12000	12000	9600	9600	7800	7800_{5}	6700_{10}	6700_{15}	6000_{15}	5900_{15}
	75	10000	10100	8100	8000	7100_{5}	7100_{10}	6500_{15}	6500_{15}	6100_{30}	6000_{25}
495x85	40	12000	12000	10300	10200	8400_{10}	8300_{5}	7200_{15}	7200_{15}	6400_{15}	6400_{15}
	75	10900	10900	8700	8700	7600_{10}	7600_{15}	7000_{20}	6900_{25}	6500_{25}	6500_{25}
525x85	40	12000	12000	10900	10800	8800_{10}	8800_{5}	7600_{15}	7600_{15}	6800_{20}	6800_{25}
	75	11600	11600	9300_{5}	9300_{5}	8100_{15}	8100_{15}	7400_{25}	7400_{30}	6900_{35}	6900_{40}
560x85	40	8700	8800	11500	11500	9400_{10}	9300_{15}	8100_{20}	8000_{20}	7200_{25}	7200_{30}
	75	12000	12000	9900_{5}	9900_{10}	8700_{20}	8600_{15}	7900_{25}	7900_{30}	7300_{40}	7300_{45}
590x85	40	8200	8200	12000_{5}	12000_{10}	9800_{15}	9800_{15}	8500_{20}	8400_{20}	7600_{25}	7600_{30}
	75	12000	12000	10500_{10}	10500_{10}	9200_{15}	9200_{15}	8300_{30}	8300_{35}	7700_{40}	7700_{45}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. Restraint value for slenderness calculations is 1200 mm
4. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

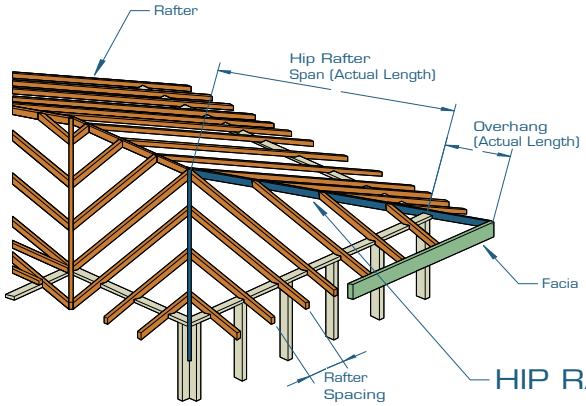
CONTINUOUS SPAN VERANDAH BEAM
AS 4055 CLASSIFICATION C1, C2 AND C3

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size DxB (mm)	Roof mass (kg/m²)	Maximum Verandah span (mm)									
		Continuous span									
130x65	40	3400	3400	2400	2500	1900	1900	1600	1500	1500	1300
	75	3400	3300	2500	2600	2000	2000	1700	1500	1500	1500
165x65	40	4400	4400	3100	3100	2500	2600	2200	2000	1900	1600
	75	4200	4200	3200	3200	2600	2700	2200	2200	2000	1900
195x65	40	5200	5200	3600	3600	2900	2900	2600	2600	2300	2100
	75	4800	4800	3800	3700	3100	3100	2700	2700	2400	2400_{5}
230x65	40	6100	6100	4300	4300	3500	3400	3000	3000	2700	2700
	75	5400	5400	4500	4500	3700	3600	3200	3100	2800_{5}	2800_{5}
260x65	40	6700	6800	4900	4900	4000	4000	3500	3400	3000	3000
	75	5900	5900	5000	5000	4100	4100	3600_{5}	3500_{5}	3200_{15}	3100_{15}
295x65	40	7200	7400	5500	5500	4500	4500	3900	3900	3500_{5}	3300
	75	6400	6500	5500	5500	4800_{5}	4700_{5}	4100_{20}	4100_{20}	3600_{30}	3600_{30}
330x65	40	7700	8000	6200	6100	5000	5000	4300_{5}	4300_{5}	3900_{15}	3800_{15}
	75	6900	7000	6000	6000	5300_{15}	5300_{15}	4500_{30}	4500_{30}	4000_{45}	4000_{45}
360x65	40	8100	8600	6700	6700	5400	5400	4700_{10}	4600_{10}	4200_{20}	4200_{25}
	75	7300	7500	6400	6400	5700_{25}	5700_{25}	4900_{40}	4900_{40}	4400_{55}	4400_{55}
395x65	40	8600	9100	7300	7200	6000_{10}	5900_{5}	5100_{20}	5100_{20}	4600_{30}	4600_{35}
	75	7700	8000	6800	6800	6200_{35}	6200_{35}	5400_{50}	5400_{55}	4800_{70}	4700_{70}
425x65	40	9000	9600	7800	7800	6300_{15}	6300_{15}	5500_{30}	5500_{30}	4900_{40}	4800_{40}
	75	8000	8500	7100_{5}	7200_{10}	6500_{40}	6500_{40}	5700_{60}	5700_{60}	5100_{85}	5100_{80}
460x65	40	9400	1010_{0}	8300	8300	6800_{20}	6800_{20}	5900_{35}	5800_{35}	5300_{50}	5300_{55}
	75	8400	8900	7400_{10}	7600_{10}	6900_{45}	6900_{45}	6200_{75}	6100_{75}	5500_{95}	5500_{95}
495x65	40	9800	1070_{0}	8700_{5}	9000_{10}	7300_{30}	7300_{30}	6300_{45}	6300_{45}	5600_{60}	5600_{60}
	75	8800	9400	7700_{15}	8000_{15}	7200_{55}	7300_{55}	6600_{90}	6600_{90}	5900_{105}	5900_{105}
130x85	40	3900	3900	2800	2800	2200	2200	1900	1900	1700	1500
	75	3700	3700	2900	2900	2300	2500	2000	2000	1800	1700
165x85	40	5000	5100	3500	3400	2800	2900	2500	2600	2200	2100
	75	4500	4500	3700	3600	3000	3000	2600	2700	2300	2300
195x85	40	5800	5800	4200	4200	3400	3300	2900	2900	2600	2700
	75	5100	5100	4300	4300	3500	3500	3100	3000	2700	2800
230x85	40	6500	6600	4900	5000	4000	4000	3500	3400	3100	3100
	75	5700	5700	4900	4900	4200	4200	3600	3500	3200	3200
260x85	40	7000	7200	5600	5600	4600	4500	3900	3900	3500	3400
	75	6300	6300	5300	5300	4800	4700	4100	4100	3700_{5}	3600
295x85	40	7600	7800	6400	6400	5200	5200	4500	4500	4000	4000
	75	6800	6800	5900	5900	5300	5300	4700_{5}	4600_{5}	4200_{15}	4200_{15}
330x85	40	8100	8500	7100	7000	5800	5700	5000	5000	4400	4400
	75	7300	7400	6400	6400	5800	5800	5200_{15}	5200_{15}	4700_{30}	4600_{25}
360x85	40	8500	9000	7500	7700	6200	6200	5400	5400	4800_{10}	4800_{10}
	75	7600	7900	6700	6800	6200_{5}	6200_{5}	5600_{25}	5600_{25}	5000_{35}	5000_{35}
395x85	40	9000	9600	8000	8300	6800	6800	5900_{10}	5800_{5}	5200_{20}	5200_{20}
	75	8100	8500	7100	7200	6600_{10}	6600_{10}	6200_{35}	6100_{35}	5500_{50}	5500_{50}
425x85	40	9400	10100	8300	8800	7300	7200	6300_{15}	6300_{15}	5600_{25}	5600_{25}
	75	8400	8900	7400	7600	6900_{15}	6900_{15}	6500_{40}	6500_{40}	5900_{60}	5800_{60}
460x85	40	9800	10700	8700	9300	7800_{10}	7800_{10}	6800_{20}	6800_{25}	6100_{35}	6000_{35}
	75	8800	9400	7800	8100	7200_{20}	7400_{25}	6800_{50}	6900_{50}	6300_{70}	6300_{70}
495x85	40	10300	11200	9100	9800	8400_{15}	8300_{15}	7300_{30}	7200_{30}	6500_{45}	6400_{45}
	75	9200	9900	8100	8600	7600_{25}	7800_{30}	7200_{55}	7300_{60}	6800_{85}	6800_{85}
525x85	40	10700	11700	9400	10200	8800_{20}	8800_{20}	7600_{35}	7600_{35}	6800_{50}	6800_{50}
	75	9500	10400	8400	8900_{5}	7800_{30}	8100_{35}	7400_{60}	7600_{65}	7100_{95}	7100_{95}
560x85	40	11100	12000	9800	10700	9100_{25}	9400_{30}	8100_{45}	8100_{45}	7300_{80}	7200_{60}
	75	9900	10800	8800	9400_{10}	8100_{35}	8500_{40}	7700_{70}	8000_{75}	7400_{100}	7600_{105}
590x85	40	11500	12000	1010_{0}	11100_{5}	9400_{30}	9800_{35}	8500_{50}	8500_{50}	7600_{70}	7600_{70}
	75	10300	11300	9000_{5}	9700_{10}	8400_{40}	8900_{45}	8000_{75}	8300_{85}	7600_{105}	7900_{110}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. Restraint value for slenderness calculations is 1200 mm
4. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

HIP RAFTER—SHEET AND TILE ROOF
AS 4055 WIND CLASSIFICATION N1, N2, N3, C1, C2 & C3



EXAMPLE:

wind speed = N3
roof load = 40 kg/m2 (sheet roof)
hip rafter span = 4500 mm (single span)
rafter spacing = 600 mm

Enter column at (N1,N2 & N3) wind speed, 600 mm rafter spacing and read down to span equal to or greater than 4500 mm for a 40 kg/m^2 roof load

ADOPT:
SmartLam GL17 — 230x65

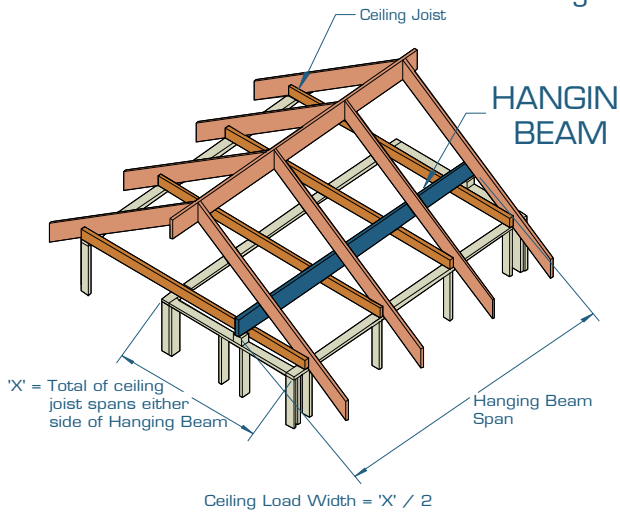
Wind speed		N1, N2 & N3				C1, C2 & C3			
Rafter spacing (mm)		600		1200		600		1200	
		Maximum Rafter span + overhang span (mm)				Maximum Rafter span + overhang span (mm)			
Member size DxB (mm)	Roof & ceiling mass (kg/m^2)	span	overhang	span	overhang	span	overhang	span	overhang
		Single span				Single span			
130x65	40	3400	675	3400	525	3000	475	3000	325
	75	3000	600	3000	575	3000	475	3000	325
165x65	40	3900	775	3900	650	3500	550	3500	375
	75	3450	650	3450	675	3450	575	3450	400
195x65	40	4300	850	4300	725	3850	650	3850	450
	75	3850	750	3850	750	3850	650	3850	450
230x65	40	4750	950	4750	850	4250	725	4250	500
	75	4250	850	4250	850	4250	750	4250	525
260x65	40	5100	1000	5100	925	4600	800	4600	550
	75	4550	900	4550	900	4550	825	4550	575
295x65	40	5500	1100	5500	1025	4950	900	4950	625
	75	4900	975	4900	975	4900	925	4900	625
330x65	40	5900	1175	5900	1125	5300	975	5300	675
	75	5250	1050	5250	1050	5250_{5}	1000	5250_{5}	675
360x65	40	6200	1200	6200	1200	5600_{5}	1050	5600_{5}	725
	75	5500	1100	5500	1100	5500_{10}	1075	5500_{10}	725
395x65	40	6550	1300	6550	1300	5900_{10}	1125	5900_{10}	775
	75	5850	1150	5850	1150	5850_{15}	1150	5850_{15}	800
425x65	40	6850	1350	6850	1350	6150_{15}	1200	6150_{15}	825
	75	6100	1200	6100	1200	6100_{20}	1200	6100_{15}	850
130x85	40	3550	700	3550	600	3200	525	3200	375
	75	3150	625	3150	625	3150	550	3150	375
165x85	40	4100	800	4100	750	3700	650	3700	450
	75	3650	725	3650	725	3650	650	3650	450
195x85	40	4550	900	4550	850	4050	750	4050	525
	75	4050	800	4050	800	4050	775	4050	525
230x85	40	5000	1000	5000	975	4500	850	4500	575
	75	4450	850	4450	850	4450	875	4450	600
260x85	40	5350	1050	5350	1050	4850	925	4850	650
	75	4800	950	4800	950	4800	950	4800	650
295x85	40	5800	1150	5800	1150	5200	1025	5200	725
	75	5150	1025	5150	1025	5150	1025	5150	725
330x85	40	6150	1225	6150	1225	5600	1100	5600	775
	75	5500	1100	5500	1100	5500	1100	5500	800
360x85	40	6500	1300	6500	1300	5900	1175	5900	825
	75	5800	1150	5800	1150	5800	1150	5800	850
395x85	40	6850	1350	6850	1350	6200_{5}	1200	6200	900
	75	6150	1225	6150	1225	6150_{5}	1225	6150_{5}	925
425x85	40	7150	1425	7150	1425	6500_{5}	1300	6500_{5}	950
	75	6400	1275	6400	1275	6400_{10}	1275	6400_{10}	975

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a batten spacing of 900 mm
3. Minimum Backspan = 200 % of overhang
4. Maximum Birdsmouth depth = 30 % of depth
5. End bearing length = 35 at end supports and 35 mm. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end support.
6. Construction loads shall not be applied to overhangs until a 190x19 mm (min) timber fascia or other fascia of equivalent stiffness is rigidly and permanently attached to the end of rafter overhangs
7. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

HANGING BEAM SUPPORTING CEILING LOADS ONLY AS 4055 CLASSIFICATION N1, N2 AND N3

ceiling mass - 20 kg/m^2



EXAMPLE:

wind speed = N3
hanging beam span = 4200 mm
X = 5000 mm

ceiling load width = X/2 = 5000/2 = 2500 mm

Enter column at 3000 mm ceiling load width & read down to a span greater than or equal to 4200 mm

ADOPT:
SmartLam GL17 - 195 x 65

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Ceiling load width (mm)	1800	2400	3000	3600	4200	4800
Member size DxB (mm)	Maximum Hanging beam span (mm)					
130x65	4100	3650	3350	3100	2900	2750
165x65	5100	4650	4300	4000	3750	3500
195x65	5850	5350	5000	4700	4450	4200
230x65	6750	6150	5750	5400	5100	4900
260x65	7500	6850	6400	6000	5700	5400
295x65	8450	7700	7150	6700	6350	6050
330x65	9400	8550	7950	7450	7000	6700
360x65	10200	9300	8600	8050	7600	7250
395x65	11200	10200	9400	8800	8300	7900
425x65	12000	10950	10100	9450	8900	8450
460x65	12000	11900	10950	10250	9650	9150
495x65	12000	12000	11850	11050	10400	9850
130x85	4450	4000	3650	3400	3200	3000
165x85	5450	5000	4650	4350	4100	3850
195x85	6250	5750	5350	5050	4800	4550
230x85	7200	6600	6150	5800	5500	5250
260x85	8050	7400	6850	6450	6100	5850
295x85	9050	8300	7700	7250	6850	6500
330x85	10050	9200	8550	8000	7600	7200
360x85	10950	10000	9300	8700	8200	7800
395x85	12000	10950	10150	9500	9000	8550
425x85	12000	11800	10950	10250	9650	9150
460x85	12000	12000	11850	11100	10450	9900
495x85	12000	12000	12000	12000	11300	10700
525x85	12000	12000	12000	12000	12000	11350
560x85	12000	12000	12000	12000	12000	12000
590x85	12000	12000	12000	12000	12000	12000

NOTES:

1. D = member depth, B = member breadth, NS = not suitable
2. The above table was based on a maximum ceiling mass of 20 (kg/m^2)
3. Minimum bearing length = 70 mm at end supports
4. Restraint value for slenderness calculations is 1500 mm
5. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

HANGING BEAM SUPPORTING CEILING LOADS ONLY AS 4055 CLASSIFICATION C1, C2 AND C3

Ceiling mass - 20 kg/m^2

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

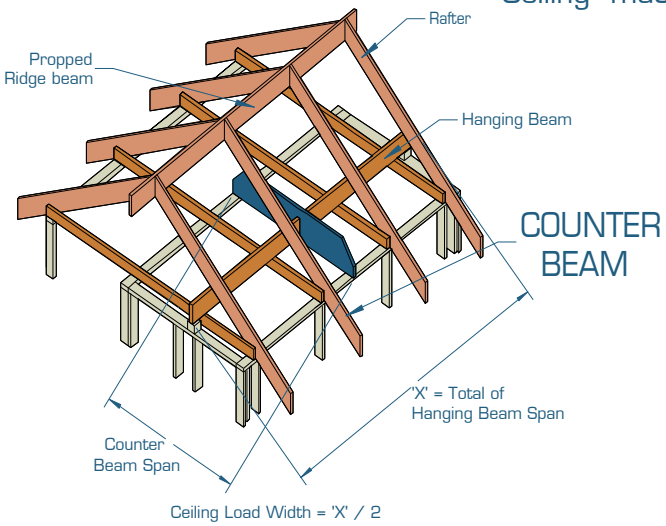
Ceiling load width (mm)	1800	2400	3000	3600	4200	4800
Member size DxB (mm)	Maximum Hanging beam span (mm)					
130x65	3400	2950	2600	2400	2200	2050
165x65	4300	3700	3300	3000	2800	2600
195x65	5050	4400	3900	3550	3300	3100
230x65	5950	5150	4600	4200	3900	3650
260x65	6750	5850	5200	4750	4400	4100
295x65	7650	6600	5900	5400	5000	4650
330x65	8450	7350	6550	6000	5550	5150
360x65	9150	7950	7100	6450	6000	5600
395x65	9950	8650	7700	7050	6500	6100
425x65	10650	9200	8250	7500	6950	6500
460x65	11400	9900	8850	8100	7500_{5}	7000_{10}
495x65	12000	10600	9450	8650	8000_{10}	7450_{15}
130x85	3750	3350	3000	2700	2500	2350
165x85	4800	4250	3800	3450	3200	3000
195x85	5650	5000	4450	4100	3750	3500
230x85	6650	5900	5250	4800	4450	4150
260x85	7500	6650	5950	5450	5000	4700
295x85	8550	7550	6750	6150	5700	5300
330x85	9550	8350	7500	6800	6300	5900
360x85	10400	9050	8100	7400	6850	6400
395x85	11300	9850	8800	8050	7450	6950
425x85	12000	10500	9400	8600	7950	7400
460x85	12000	11300	10100	9200	8550	7950
495x85	12000	12000	10800	9850	9100	8500_{5}
525x85	12000	12000	11400	10400	9600	9000_{5}
560x85	12000	12000	12000	11000	10200_{5}	9550_{10}
590x85	12000	12000	12000	11550_{5}	10700_{10}	10000_{15}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable
2. The above table was based on a maximum ceiling mass of 20 (kg/m^2)
3. Minimum bearing length = 70 mm at end supports
4. Restraint value for slenderness calculations is 1500 mm
5. Value in subscript indicate extra bearing length required
6. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

COUNTER BEAM SUPPORTING HANGING BEAM AS 4055 CLASSIFICATION N1, N2 AND N3

Ceiling mass - 20 kg/m^2



EXAMPLE:

wind speed = N3
total of hanging beam SPAN = 6400 mm
ceiling load width = 'X' / 2 = 6400 / 2 = 3200 mm

counter beam span = 4500 mm

Enter column at 3600 mm ceiling load width and read down to a span greater than or equal to 4500 mm

ADOPT:

SmartLam GL17 - 165 x 65

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Ceiling load width (mm)	600	1800	2400	3000	3600	4200	4800	5400	6600
Member size DxB (mm)	Maximum Counter beam span (mm)								
130x65	5900	4600	4250	3950	3700	3550	3400	3250	3050
165x65	7150	5600	5200	4950	4700	4500	4350	4150	3900
195x65	8200	6450	6000	5650	5400	5200	5000	4850	4600
230x65	9450	7450	6900	6550	6250	6000	5750	5600	5300
260x65	10550	8300	7700	7300	6950	6650	6400	6200	5900
295x65	11800	9350	8650	8150	7800	7450	7200	6950	6600
330x65	12000	10400	9650	9100	8650	8300	7950	7700	7300
360x65	12000	11300	10500	9900	9400	9000	8650	8350	7900
395x65	12000	12000	11500	10800	10300	9850	9450	9150	8650
425x65	12000	12000	12000	11650	11050	10600	10200	9850	9250
460x65	12000	12000	12000	12000	12000	11500	11050	10650	10050
495x65	10450	12000	12000	12000	12000	12000	11900	11500	10800
130x85	6200	4900	4600	4300	4050	3850	3700	3550	3300
165x85	7500	5950	5550	5250	5050	4850	4700	4550	4250
195x85	8600	6850	6400	6050	5800	5550	5400	5200	4950
230x85	9900	7950	7400	7000	6700	6400	6200	6000	5700
260x85	11000	8850	8250	7800	7450	7150	6900	6700	6350
295x85	12000	9950	9300	8750	8350	8000	7750	7500	7100
330x85	12000	11100	10350	9750	9300	8900	8600	8300	7850
360x85	12000	12000	11250	10600	10100	9700	9350	9050	8550
395x85	12000	12000	12000	11650	11100	10600	10250	9900	9350
425x85	12000	12000	12000	12000	11950	11450	11000	10650	10050
460x85	11200	12000	12000	12000	12000	12000	11950	11550	10850
495x85	10100	12000	12000	12000	12000	12000	12000	12000	11750
525x85	9700	12000	12000	12000	12000	12000	12000	12000	12000
560x85	9450	10850	12000	12000	12000	12000	12000	12000	12000
590x85	9300	10100	11150	12000	12000	12000	12000	12000	12000

COUNTER BEAM SUPPORTING HANGING BEAM
AS 4055 CLASSIFICATION C1, C2 AND C3

Ceiling mass - 20 kg/m^2

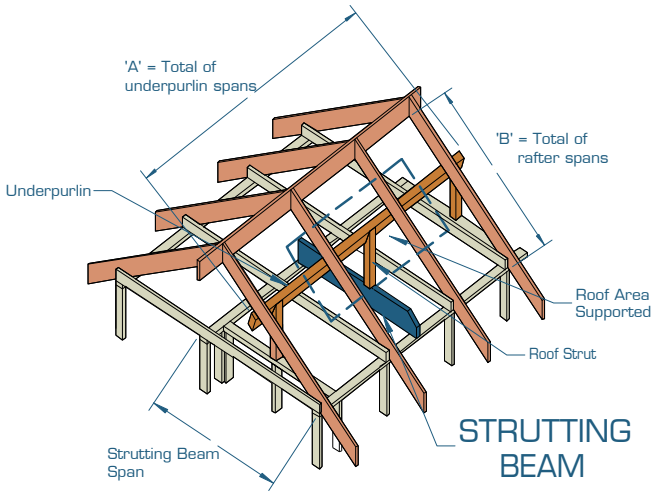
Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Ceiling load width (mm)	600	1800	2400	3000	3600	4200	4800	5400	6600
Member size DxB (mm)	Maximum Counter beam span (mm)								
130x65	5850	3400	2950	2650	2400	2200	2050	1950	1750
165x65	7150	4300	3750	3350	3050	2800	2650	2500	2250
195x65	8200	5100	4400	3950	3600	3350	3100	2950	2650
230x65	9450	6000	5200	4650	4250	3950	3650	3450	3150
260x65	10550	6800	5900	5250	4800	4450	4150	3900	3550
295x65	11800	7700	6700	6000	5450	5050	4700	4450	4000
330x65	12000	8500	7400	6650	6050	5600	5250	4950	4450
360x65	12000	9200	8000	7200	6550	6050	5650	5350	4850
395x65	12000	10000	8700	7800	7150	6600	6200	5800	5250
425x65	12000	10700	9300	8350	7650	7050	6600	6250	5650
460x65	12000	11500	10000	8950	8200	7600	7100	6700	6050
495x65	10450	12000	10700	9600	8750	8100	7600	7150	6500
130x85	6200	3900	3350	3000	2750	2550	2350	2250	2000
165x85	7500	4950	4250	3800	3500	3200	3000	2850	2550
195x85	8600	5800	5050	4500	4100	3800	3550	3350	3050
230x85	9900	6850	5950	5350	4850	4500	4200	3950	3600
260x85	11000	7750	6700	6000	5500	5100	4750	4500	4050
295x85	12000	8750	7600	6800	6250	5750	5400	5100	4600
330x85	12000	9700	8450	7550	6900	6400	6000	5650	5100
360x85	12000	10500	9150	8200	7500	6950	6500	6100	5550
395x85	12000	11400	9900	8900	8150	7550	7050	6650	6000
425x85	12000	12000	10600	9500	8700	8050	7550	7150	6450
460x85	11200	12000	11400	10200	9350	8650	8100	7650	6950
495x85	10100	12000	12000	10900	10000	9250	8700	8200	7400
525x85	9700	12000	12000	11500	10550	9750	9150	8650	7850
560x85	9450	10850	12000	12000	11150	10350	9700	9150	8300
590x85	9300	10100	11150	12000	11700	10850	10200	9600	8700

NOTES:

D = member depth, B = member breadth, NS = not suitable
The above table was based on a maximum ceiling mass of 20 (kg/m^2)
Minimum bearing length = 70 mm at end supports
Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

STRUTTING BEAM SUPPORTING UNDERPURLINS AS 4055 CLASSIFICATION N1, N2 AND N3



EXAMPLE:

wind speed = N3
sheet roof = 20 kg/m^2
total of underpurlin span 'A'= 5000 mm
total of rafter span 'B' = 4200 mm
roof area supported = (A/2) x (B/2)
= (5000/2) x (4200/2)
= 5250000 mm^2 **(convert to m^2)**
= 5250000/1000000 = 5.25 m^2

strutting beam span = 4500 mm

Enter column at 6m^2 roof area supported and read down to a span greater than or equal to 4500 mm

ADOPT:
SmartLam GL17 - 195 x 65

Roof area supported (m^2)		2	4	6	8	10	12
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Strutting beam span (mm)					
130x65	20	4100	3700	2450	1800	1450	1200
	60	3650	2550	2050	1650	1350	1100
165x65	20	5250	5050	3950	2950	2350	1950
	60	5000	3750	3000	2600	2150	1800
195x65	20	6200	5950	5550	4150	3300	2750
	60	6050	4750	3950	3400	3000	2500
230x65	20	7300	7050	6750	5800	4600	3850
	60	7300	5750	4950	4450	3950	3500
260x65	20	8250	7950	7700	7050	5900	4900
	60	8250	6650	5700	5150	4700	4350
295x65	20	9350	9000	8700	8250	7600	6350
	60	9350	7800	6650	5950	5450	5100
330x65	20	10450	10100	9750	9450	8750	7850
	60	10450	9000	7700	6850	6250	5850
360x65	20	11400	11000	10650	10350	9850	9150
	60	11400	10100	8600	7650	7000	6500
395x65	20	11950	12000	11700	11350	11000	10400
	60	12000	11450	9800	8700	7900	7350
425x65	20	10400	10950	11900	12000	11850	11550
	60	11200	12000	10850	9600	8750	8100
460x65	20	9850	10150	10450	10900	11400	12000
	60	10250	11200	12000	10800	9800	9050
495x65	20	9550	9750	9950	10200	10500	10800
	60	9800	10400	11150	12000	10900	10050
130x85	20	4500	4350	3200	2400	1900	1600
	60	4150	2950	2400	2050	1750	1450
165x85	20	5700	5500	5050	3900	3100	2550
	60	5500	4250	3500	3000	2650	2350
195x85	20	6750	6500	6100	5450	4350	3600
	60	6600	5250	4500	3900	3500	3150
230x85	20	8000	7700	7350	6700	6050	5050
	60	8000	6350	5450	4900	4550	4100
260x85	20	9000	8700	8400	7750	7150	6450
	60	9000	7350	6300	5700	5200	4850
295x85	20	10250	9850	9550	9050	8350	7850
	60	10250	8600	7400	6600	6050	5650
330x85	20	11450	11050	10650	10350	9650	9050
	60	11450	9900	8550	7650	7000	6500
360x85	20	12000	12000	11650	11300	10850	10150
	60	12000	11100	9600	8550	7800	7250
395x85	20	11450	12000	12000	12000	12000	11500
	60	12000	12000	10850	9700	8850	8200
425x85	20	10300	10650	11150	12000	12000	12000
	60	10800	12000	12000	10750	9800	9050
460x85	20	9800	10000	10250	10500	10800	11200
	60	10100	10700	11700	12000	11000	10150
495x85	20	9500	9650	9800	10000	10150	10350
	60	9700	10100	10600	11200	12000	11300
525x85	20	9350	9450	9600	9700	9850	10000
	60	9500	9800	10150	10550	11050	11750
560x85	20	9200	9300	9400	9500	9600	9700
	60	9350	9550	9800	10100	10450	10850
590x85	20	9100	9200	9250	9350	9450	9550
	60	9200	9400	9650	9850	10100	10400

STRUTTING BEAM SUPPORTING UNDERPURLINS
AS 4055 CLASSIFICATION C1, C2 AND C3

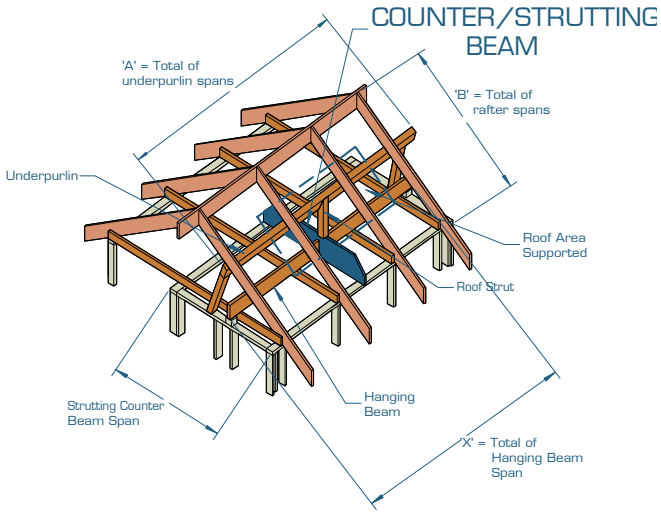
Roof area supported (m^2)		2	4	6	8	10	12
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Strutting beam span (mm)					
130x65	20	4100	2400	1600	1200	NS	NS
	60	3650	2550	1700	1250	NS	NS
165x65	20	5250	3900	2600	1900	1550	1250
	60	5000	3750	2750	2050	1650	1350
195x65	20	6200	5450	3600	2700	2150	1800
	60	6050	4750	3800	2850	2300	1900
230x65	20	7300	7050	5050	3750	3000	2500
	60	7300	5750	4950	4000	3200	2650
260x65	20	8250	7950	6450	4800	3850	3200
	60	8250	6650	5700	5050	4050	3400
295x65	20	9350	9000	8350	6200	4950	4100
	60	9350	7800	6650	5950	5200	4350
330x65	20	10450	10100	9750	7700	6100	5100
	60	10450	9000	7700	6850	6250	5350
360x65	20	11400	11000	10650	9050	7200	6000
	60	11400	10100	8600	7650	7000	6250
395x65	20	11950	12000	11700	10800	8550	7100
	60	12000	11450	9800	8700	7900	7350
425x65	20	10400	10950	11900	12000	9850	8150
	60	11200	12000	10850	9600	8750	8100
460x65	20	9850	10150	10450	10900	11400	9450
	60	10250	11200	12000	10800	9800	9050
495x65	20	9550	9750	9950	10200	10500	10800
	60	9800	10400	11150	12000	10900	10050
130x85	20	4500	3150	2100	1550	1250	1050
	60	4150	2950	2200	1650	1350	1100
165x85	20	5700	5100	3400	2500	2000	1650
	60	5500	4250	3500	2700	2150	1800
195x85	20	6750	6500	4750	3550	2800	2350
	60	6600	5250	4500	3750	3000	2500
230x85	20	8000	7700	6650	4950	3950	3250
	60	8000	6350	5450	4900	4150	3500
260x85	20	9000	8700	8400	6350	5050	4200
	60	9000	7350	6300	5700	5200	4450
295x85	20	10250	9850	9550	8200	6500	5400
	60	10250	8600	7400	6600	6050	5650
330x85	20	11450	11050	10650	10200	8050	6700
	60	11450	9900	8550	7650	7000	6500
360x85	20	12000	12000	11650	11300	9500	7850
	60	12000	11100	9600	8550	7800	7250
395x85	20	11450	12000	12000	12000	11350	9350
	60	12000	12000	10850	9700	8850	8200
425x85	20	10300	10650	11150	12000	12000	10750
	60	10800	12000	12000	10750	9800	9050
460x85	20	9800	10000	10250	10500	10800	11200
	60	10100	10700	11700	12000	11000	10150
495x85	20	9500	9650	9800	10000	10150	10350
	60	9700	10100	10600	11200	12000	11300
525x85	20	9350	9450	9600	9700	9850	10000
	60	9500	9800	10150	10550	11050	11750
560x85	20	9200	9300	9400	9500	9600	9700
	60	9350	9550	9800	10100	10450	10850
590x85	20	9100	9200	9250	9350	9450	9550
	60	9200	9400	9650	9850	10100	10400

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. Minimum bearing length = 70 mm at end supports.
3. Restraint value for slenderness calculations is 1500 mm
4. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

STRUTTING/COUNTER BEAM SUPPORTING UNDERPURLINS & HANGING BEAM AS 4055 CLASSIFICATION N1, N2 AND N3

Ceiling mass - 20 kg/m^2



EXAMPLE:
wind speed = N3
sheet roof = 40kg/m^2
total of underpurlin span 'A'= 5000 mm
total of rafter span 'B' = 4200 mm
roof area supported = (A/2) x (B/2)
= (5000/2) x (4200/2)
= 5250000 mm^2 **(convert to m^2)**
= 5250000/1000000 = 5.25 m^2
total of hanging beam span 'X' = 4500 mm
effective beam spacing = 'X' / 2 = 4500 / 2 = 2250 mm
strutting/counter beam span = 4500 mm

Enter column at 3600 mm effective beam spacing, 6m^2 roof area supported and read down to a span greater than or equal to 4500 mm

ADOPT:
SmartLam GL17 - 260 x 65

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Effective Beam spacing (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Strutting/Counter beam span (mm)											
130x65	40	3300	2700	2300	2000	1800	1650	2900	2450	2150	1950	1750	1650
	75	2850	2150	1800	1550	1350	1150	2600	2050	1750	1550	1300	1100
165x65	40	4200	3700	3250	2900	2600	2400	3800	3350	3000	2750	2500	2300
	75	3850	3100	2600	2250	2050	1800	3500	2900	2500	2200	2000	1750
195x65	40	4950	4350	3950	3650	3350	3100	4400	4000	3700	3450	3200	2950
	75	4500	3850	3350	2950	2650	2400	4100	3600	3150	2800	2550	2350
230x65	40	5750	5150	4700	4350	4100	3850	5100	4700	4350	4100	3900	3700
	75	5300	4550	4050	3700	3400	3100	4800	4250	3900	3600	3300	3050
260x65	40	6500	5850	5350	5000	4650	4400	5700	5250	4950	4650	4450	4250
	75	6000	5200	4650	4250	3950	3700	5400	4800	4400	4100	3850	3650
295x65	40	7350	6700	6150	5700	5350	5100	6400	5950	5600	5300	5050	4850
	75	6850	5950	5350	4900	4550	4300	6100	5500	5050	4700	4400	4150
330x65	40	8200	7500	6950	6500	6100	5800	7100	6650	6300	5950	5700	5450
	75	7700	6750	6050	5550	5200	4850	6800	6150	5650	5300	4950	4700
360x65	40	9000	8250	7650	7150	6750	6400	7700	7250	6900	6550	6250	6000
	75	8450	7450	6700	6150	5750	5400	7400	6750	6250	5800	5500	5200
395x65	40	9900	9150	8500	8000	7550	7150	8450	8000	7600	7250	6950	6650
	75	9350	8300	7500	6900	6400	6050	8100	7450	6900	6450	6100	5800
425x65	40	10650	9900	9300	8700	8250	7850	9050	8600	8200	7850	7550	7250
	75	10100	9050	8200	7550	7050	6600	8750	8050	7500	7000	6650	6300
460x65	40	11550	10850	10200	9600	9100	8650	9800	9350	8950	8550	8250	7950
	75	11050	9950	9050	8350	7750	7300	9500	8800	8200	7700	7300	6900
495x65	40	12000	11750	11100	10500	10000	9500	10550	10100	9700	9300	8950	8650
	75	11950	10850	9950	9150	8550	8050	10250	9550	8950	8400	7950	7550

STRUTTING/COUNTER BEAM SUPPORTING UNDERPURLINS & HANGING BEAM AS 4055 CLASSIFICATION N1, N2 AND N3 [Cont'd]

Ceiling mass - 20 kg/m^2

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Effective Beam spacing (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Strutting/Counter beam span (mm)											
130x85	40	3650	3050	2600	2300	2100	1900	3200	2750	2450	2200	2000	1850
	75	3200	2450	2050	1800	1600	1450	2900	2350	2000	1750	1600	1450
165x85	40	4550	4000	3650	3300	3000	2750	4050	3700	3400	3100	2850	2650
	75	4150	3500	2950	2600	2350	2150	3800	3250	2800	2500	2300	2100
195x85	40	5350	4750	4350	4000	3750	3550	4700	4350	4050	3800	3600	3350
	75	4900	4200	3750	3350	3000	2750	4450	3950	3600	3200	2950	2700
230x85	40	6250	5600	5150	4800	4500	4250	5500	5100	4750	4500	4250	4050
	75	5800	5000	4450	4100	3800	3600	5200	4650	4250	3950	3700	3450
260x85	40	7000	6350	5850	5450	5150	4850	6150	5700	5400	5100	4850	4650
	75	6550	5700	5100	4700	4350	4100	5850	5250	4800	4500	4200	4000
295x85	40	7950	7300	6750	6300	5900	5600	6900	6450	6100	5800	5550	5300
	75	7450	6550	5900	5400	5050	4750	6600	6000	5500	5150	4850	4600
330x85	40	8900	8200	7600	7150	6750	6400	7650	7250	6850	6550	6250	6000
	75	8400	7400	6700	6150	5750	5400	7350	6750	6200	5800	5500	5200
360x85	40	9700	9000	8400	7900	7450	7100	8350	7900	7500	7200	6850	6600
	75	9200	8200	7400	6850	6350	6000	8000	7400	6850	6400	6050	5750
395x85	40	10650	9950	9350	8800	8350	7950	9100	8700	8300	7950	7600	7350
	75	10150	9100	8300	7650	7150	6700	8800	8150	7600	7100	6750	6400
425x85	40	11500	10800	10150	9600	9150	8700	9800	9350	8950	8600	8300	8000
	75	11000	9950	9100	8400	7850	7350	9500	8800	8250	7750	7350	7000
460x85	40	12000	11800	11150	10600	10050	9600	10600	10150	9750	9400	9050	8750
	75	12000	10900	10000	9300	8650	8150	10300	9600	9050	8500	8050	7700
495x85	40	12000	12000	12000	11550	11050	10550	11400	11000	10600	10200	9850	9550
	75	12000	11900	11000	10200	9550	9000	11100	10450	9850	9300	8800	8400
525x85	40	12000	12000	12000	12000	11900	11400	12000	11700	11300	10900	10550	10250
	75	12000	12000	11850	11050	10350	9750	11850	11150	10550	10000	9500	9050
560x85	40	12000	12000	12000	12000	12000	12000	12000	12000	12000	11750	11400	11050
	75	12000	12000	12000	12000	11300	10650	12000	12000	11350	10800	10300	9850
590x85	40	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	11800
	75	12000	12000	12000	12000	12000	11450	12000	12000	12000	11500	11000	10500

NOTES:

1. D = member depth, B = member breadth, NS = not suitable
2. Minimum bearing length = 70 mm at end supports
3. The above table was based on a maximum ceiling mass of 20 (kg/m^2)
4. Restraint value for slenderness calculations is 1500 mm
5. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

STRUTTING/COUNTER BEAM SUPPORTING UNDERPURLINS & HANGING BEAM AS 4055 CLASSIFICATION C1, C2 AND C3

Ceiling mass - 20 kg/m^2

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

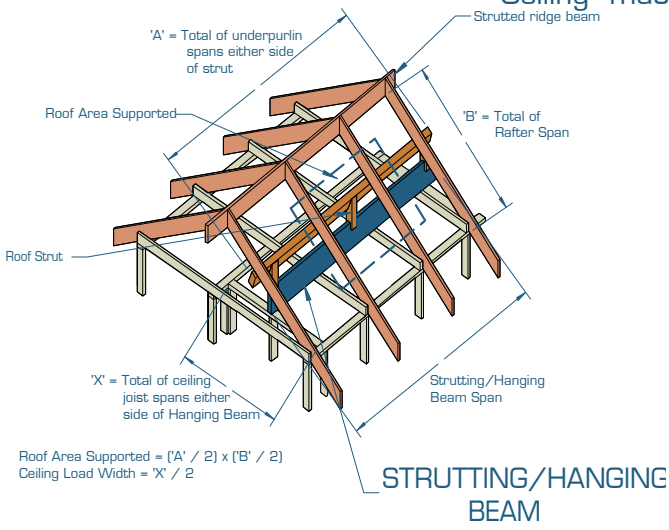
Effective Beam spacing (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Strutting/Counter beam span (mm)											
130x65	40	3300	1700	1100	NS	NS	NS	2900	1700	1100	NS	NS	NS
	75	2850	1800	1200	NS	NS	NS	2600	1850	1200	NS	NS	NS
165x65	40	4200	2750	1800	1350	1050	NS	3800	2850	1800	1350	1050	NS
	75	3850	2950	1950	1450	1150	NS	3500	2900	1950	1450	1150	NS
195x65	40	4950	3900	2550	1900	1500	1250	4400	4000	2600	1900	1500	1250
	75	4500	3850	2700	2000	1600	1350	4100	3600	2800	2050	1600	1350
230x65	40	5750	5150	3550	2650	2100	1750	5100	4700	3650	2700	2100	1750
	75	5300	4550	3850	2850	2250	1850	4800	4250	3900	2850	2250	1850
260x65	40	6500	5850	4600	3400	2700	2250	5700	5250	4800	3450	2700	2250
	75	6000	5200	4650	3650	2900	2400	5400	4800	4400	3700	2900	2400
295x65	40	7350	6700	6000	4400	3500	2900	6400	5950	5600	4500	3550	2900
	75	6850	5950	5350	4700	3750	3100	6100	5500	5050	4700	3800	3100
330x65	40	8200	7500	6950	5450	4300	3550	7100	6650	6300	5650	4400	3600
	75	7700	6750	6050	5550	4600	3800	6800	6150	5650	5300	4750	3850
360x65	40	9000	8250	7650	6450	5100	4200	7700	7250	6900	6550	5200	4250
	75	8450	7450	6700	6150	5450	4500	7400	6750	6250	5800	5500	4600
395x65	40	9900	9150	8500	7800	6050	5000	8450	8000	7600	7250	6250	5100
	75	9350	8300	7500	6900	6400	5350	8100	7450	6900	6450	6100	5500
425x65	40	10650	9900	9300	8700	7000	5750	9050	8600	8200	7850	7250	5850
	75	10100	9050	8200	7550	7050	6150	8750	8050	7500	7000	6650	6300
460x65	40	11550	10850	10200	9600	8150	6700	9800	9350	8950	8550	8250	6850
	75	11050	9950	9050	8350	7750	7200	9500	8800	8200	7700	7300	6900
495x65	40	12000	11750	11100	10500	9450	7700	10550	10100	9700	9300	8950	7950
	75	11950	10850	9950	9150	8550	8050	10250	9550	8950	8400	7950	7550
130x85	40	3650	2200	1450	1100	NS	NS	3200	2250	1450	1100	NS	NS
	75	3200	2400	1550	1150	NS	NS	2900	2350	1550	1150	NS	NS
165x85	40	4550	3650	2350	1750	1400	1150	4050	3700	2400	1750	1400	1150
	75	4150	3500	2550	1900	1500	1250	3800	3250	2600	1900	1500	1250
195x85	40	5350	4750	3350	2500	1950	1650	4700	4350	3450	2500	2000	1650
	75	4900	4200	3600	2650	2100	1750	4450	3950	3600	2700	2150	1750
230x85	40	6250	5600	4700	3500	2750	2300	5500	5100	4750	3550	2800	2300
	75	5800	5000	4450	3700	2950	2450	5200	4650	4250	3800	3000	2450
260x85	40	7000	6350	5850	4500	3550	2950	6150	5700	5400	4600	3600	2950
	75	6550	5700	5100	4700	3800	3150	5850	5250	4800	4500	3850	3200
295x85	40	7950	7300	6750	5850	4600	3800	6900	6450	6100	5800	4700	3850
	75	7450	6550	5900	5400	4900	4050	6600	6000	5500	5150	4850	4150
330x85	40	8900	8200	7600	7150	5700	4700	7650	7250	6850	6550	5850	4800
	75	8400	7400	6700	6150	5750	5050	7350	6750	6200	5800	5500	5150
360x85	40	9700	9000	8400	7900	6750	5550	8350	7900	7500	7200	6850	5650
	75	9200	8200	7400	6850	6350	5950	8000	7400	6850	6400	6050	5750
395x85	40	10650	9950	9350	8800	8100	6600	9100	8700	8300	7950	7600	6800
	75	10150	9100	8300	7650	7150	6700	8800	8150	7600	7100	6750	6400
425x85	40	11500	10800	10150	9600	9150	7600	9800	9350	8950	8600	8300	7900
	75	11000	9950	9100	8400	7850	7350	9500	8800	8250	7750	7350	7000
460x85	40	12000	11800	11150	10600	10050	8900	10600	10150	9750	9400	9050	8750
	75	12000	10900	10000	9300	8650	8150	10300	9600	9050	8500	8050	7700
495x85	40	12000	12000	12000	11550	11050	10300	11400	11000	10600	10200	9850	9550
	75	12000	11900	11000	10200	9550	9000	11100	10450	9850	9300	8800	8400
525x85	40	12000	12000	12000	12000	11900	11400	12000	11700	11300	10900	10550	10250
	75	12000	12000	11850	11050	10350	9750	11850	11150	10550	10000	9500	9050
560x85	40	12000	12000	12000	12000	12000	12000	12000	12000	12000	11750	11400	11050
	75	12000	12000	12000	12000	11300	10650	12000	12000	11350	10800	10300	9850
590x85	40	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	11800
	75	12000	12000	12000	12000	12000	11450	12000	12000	12000	11500	11000	10500

NOTES:

D = member depth, B = member breadth, NS = not suitable.
Minimum bearing length = 70 mm at end supports
The above table was based on a maximum ceiling mass of 20 (kg/m^2)
Restraint value for slenderness calculations is 1500 mm
Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

STRUTTING/HANGING BEAM
AS 4055 CLASSIFICATION N1, N2 AND N3

Ceiling mass - 20 kg/m^2



EXAMPLE:
wind speed = N3
sheet roof = 40 kg/m^2
A = 5000 mm, B = 4200 mm
roof area supported = (A/2) x (B/2)
= (5000/2) x (4200/2)
= 5250000 mm^2 **(convert to m^2)**
= 5250000/1000000 = 5.25 m^2
strutting/hanging beam span = 4200 mm
ceiling joist span ('X') = 4400 mm
ceiling load width = ['X' / 2) = 4400/2 = 2200 mm

Enter column at 3600 mm ceiling load width, 6 m^2 roof area supported and read down to a span greater than or equal to 4200 mm

ADOPT:
SmartLam GL17 - 260 x 65

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Ceiling load width (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Strutting/Hanging beam span (mm)											
130x65	40	3150	2600	2250	2000	1800	1650	2650	2300	2050	1850	1700	1600
	75	2750	2150	1800	1550	1350	1150	2400	1950	1700	1500	1300	1100
165x65	40	4100	3600	3150	2850	2600	2400	3500	3150	2850	2600	2400	2250
	75	3750	3000	2550	2250	2000	1800	3250	2750	2400	2150	1950	1750
195x65	40	4800	4250	3900	3600	3300	3050	4100	3800	3550	3250	3050	2850
	75	4400	3750	3300	2900	2600	2400	3900	3450	3050	2750	2500	2300
230x65	40	5650	5050	4650	4300	4050	3850	4750	4450	4150	3950	3750	3600
	75	5200	4500	4000	3700	3350	3100	4550	4100	3750	3450	3200	2950
260x65	40	6350	5750	5250	4900	4600	4400	5350	5000	4700	4500	4250	4100
	75	5900	5100	4600	4200	3950	3700	5100	4600	4250	3950	3750	3550
295x65	40	7250	6600	6050	5650	5300	5050	6000	5650	5350	5100	4850	4700
	75	6750	5900	5300	4850	4500	4250	5750	5250	4850	4550	4300	4100
330x65	40	8150	7450	6850	6400	6050	5750	6700	6350	6000	5750	5500	5300
	75	7650	6700	6000	5500	5150	4850	6450	5900	5450	5100	4850	4600
360x65	40	8950	8200	7600	7100	6700	6350	7300	6950	6600	6300	6050	5800
	75	8400	7400	6650	6100	5700	5350	7050	6450	6000	5650	5350	5050
395x65	40	9900	9150	8500	7950	7500	7100	8050	7650	7300	6950	6700	6450
	75	9350	8250	7450	6850	6400	6000	7750	7150	6650	6250	5900	5650
425x65	40	10750	9950	9250	8700	8200	7800	8700	8250	7900	7550	7250	7000
	75	10200	9050	8150	7500	7000	6550	8400	7750	7250	6800	6450	6150
460x65	40	11800	10950	10200	9600	9100	8650	9450	9000	8650	8300	7950	7700
	75	11200	9950	9050	8300	7750	7250	9150	8500	7950	7500	7100	6750
495x65	40	12000	11950	11200	10550	10000	9500	10250	9800	9400	9000	8700	8400
	75	12000	10950	9950	9150	8550	8000	9900	9250	8650	8150	7750	7400

STRUTTING/HANGING BEAM
AS 4055 CLASSIFICATION N1, N2 AND N3 [Cont'd]

Ceiling mass - 20 kg/m^2

Note: Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering.

Ceiling load width (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Strutting/Hanging beam span (mm)											
130x85	40	3550	2950	2550	2250	2050	1900	2950	2600	2300	2100	1950	1800
	75	3100	2450	2050	1800	1600	1450	2700	2250	1950	1700	1550	1400
165x85	40	4450	3950	3600	3200	2950	2700	3800	3500	3200	2950	2750	2550
	75	4050	3450	2900	2550	2300	2100	3600	3100	2700	2450	2200	2050
195x85	40	5200	4650	4250	3950	3700	3500	4400	4100	3850	3650	3450	3250
	75	4800	4150	3700	3300	3000	2750	4200	3800	3400	3100	2850	2650
230x85	40	6100	5500	5050	4700	4450	4200	5150	4800	4550	4300	4100	3950
	75	5700	4900	4400	4050	3800	3550	4900	4450	4100	3850	3600	3350
260x85	40	6900	6250	5800	5400	5100	4800	5800	5450	5150	4900	4700	4500
	75	6450	5600	5050	4650	4350	4100	5550	5050	4650	4350	4100	3900
295x85	40	7850	7200	6650	6200	5850	5550	6500	6150	5850	5600	5350	5150
	75	7400	6450	5850	5350	5000	4700	6250	5750	5300	5000	4700	4500
330x85	40	8850	8150	7550	7050	6700	6350	7300	6900	6550	6300	6000	5800
	75	8350	7350	6650	6100	5700	5350	7000	6450	6000	5650	5350	5100
360x85	40	9750	9000	8350	7850	7400	7050	7950	7550	7200	6900	6650	6400
	75	9200	8150	7350	6800	6300	5950	7650	7100	6600	6200	5900	5600
395x85	40	10800	10000	9350	8800	8300	7900	8750	8350	8000	7650	7350	7100
	75	10200	9100	8250	7600	7100	6650	8450	7850	7350	6900	6550	6250
425x85	40	11700	10900	10200	9600	9100	8650	9450	9050	8650	8300	8000	7750
	75	11150	9950	9050	8350	7800	7350	9150	8500	8000	7550	7150	6800
460x85	40	12000	12000	11250	10650	10100	9600	10300	9900	9500	9100	8800	8500
	75	12000	11000	10050	9300	8650	8150	10000	9350	8750	8300	7850	7500
495x85	40	12000	12000	12000	11700	11150	10600	11200	10750	10350	9950	9600	9300
	75	12000	12000	11050	10250	9550	9000	10850	10200	9600	9050	8600	8200
525x85	40	12000	12000	12000	12000	12000	11500	11950	11500	11100	10700	10350	10000
	75	12000	12000	12000	11100	10400	9750	11650	10900	10300	9750	9300	8850
560x85	40	10250	12000	12000	12000	12000	12000	12000	12000	12000	11600	11200	10850
	75	12000	12000	12000	12000	11350	10700	12000	11800	11150	10600	10100	9650
590x85	40	9200	9450	9700	10100	10650	12000	12000	12000	12000	12000	11950	11600
	75	9400	10000	11750	12000	12000	11550	12000	12000	11950	11350	10800	10350

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a maximum ceiling mass of 20 (kg/m^2).
3. Minimum bearing length = 70 mm at end supports.
4. Restraint value for slenderness calculations is 1500 mm
5. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

STRUTTING/HANGING BEAM
AS 4055 CLASSIFICATION C1, C2 AND C3

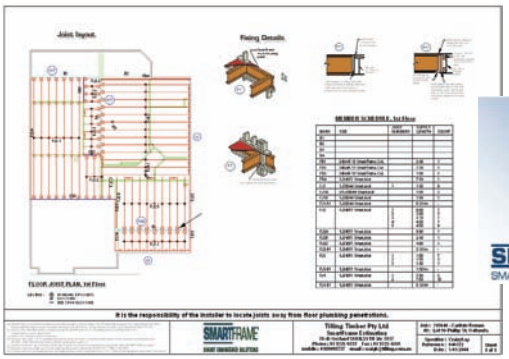
Ceiling mass - 20 kg/m^2

Ceiling load width (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size DxB (mm)	Roof mass (kg/m^2)	Maximum Strutting/Hanging beam span (mm)											
130x65	40	2750	2300	1600	1200	NS	NS	1950	2000	1550	1200	NS	NS
	75	2750	2100	1400	1050	NS	NS	1950	1950	1400	1050	NS	NS
165x65	40	3500	3300	2550	1950	1550	1200	2450	2500	2450	1900	1550	1150
	75	3550	3000	2300	1700	1400	NS	2500	2550	2200	1700	1350	NS
195x65	40	4100	4200	3500	2700	2150	1800	2900	2950	3000	2600	2150	1800
	75	4150	3750	3150	2400	1950	1600	2900	3000	3000	2350	1900	1600
230x65	40	4800	4900	4450	3700	3000	2500	3400	3450	3500	3550	2900	2450
	75	4900	4500	4000	3300	2700	2250	3400	3500	3600	3200	2600	2200
260x65	40	5450	5550	5250	4650	3800	3200	3800	3850	3900	4000	3700	3100
	75	5500	5100	4600	4200	3400	2850	3850	3950	4050	3950	3300	2800
295x65	40	6150	6250	6050	5600	4850	4100	4350	4400	4450	4500	4550	3950
	75	6200	5900	5300	4850	4350	3650	4350	4450	4550	4550	4200	3550
330x65	40	6800	6900	6850	6400	5900	5000	4800	4850	4900	4950	5000	4800
	75	6900	6700	6000	5500	5150	4450	4850	4950	5000	5100	4850	4350
360x65	40	7400	7500	7600	7100	6700	5800	5200	5250	5300	5350	5400	5450
	75	7450	7400	6650	6100	5700	5200	5250	5300	5400	5500	5350	5050
395x65	40	8050	8150	8250	7950	7500	6850	5650	5700	5750	5800	5850	5900
	75	8100	8250	7450	6850	6400	6000	5700	5800	5850	5950	5900	5650
425x65	40	8600	8700	8800	8700	8200	7750	6050	6100	6150	6200	6250	6300
	75	8650	8850	8150	7500	7000	6550	6100	6150	6250	6350	6450	6150
460x65	40	9250	9350	9450	9550	9100	8650	6500	6550	6600	6650	6700	6750
	75	9300	9500	9050	8300	7750	7250	6550	6600	6700	6800	6900	6750
495x65	40	9900	10000	10100	10200	10000	9500	6950	7000	7050	7100	7150	7200
	75	9950	10100	9950	9150	8550	8000	7000	7100	7150	7250	7350	7400
130x85	40	3150	2650	2100	1550	1250	1050	2200	2250	2000	1550	1250	1050
	75	3100	2450	1850	1400	1100	NS	2250	2250	1800	1400	1100	NS
165x85	40	3950	3800	3100	2500	2050	1700	2800	2850	2900	2450	2000	1700
	75	4050	3450	2900	2250	1800	1500	2800	2900	2700	2200	1800	1500
195x85	40	4650	4650	4000	3450	2800	2350	3300	3350	3400	3350	2750	2350
	75	4750	4150	3700	3100	2500	2100	3300	3400	3400	3000	2450	2100
230x85	40	5500	5500	5050	4400	3900	3250	3850	3900	3950	4000	3750	3200
	75	5550	4900	4400	4050	3450	2900	3900	4000	4100	3850	3400	2850
260x85	40	6200	6250	5800	5300	4750	4150	4350	4400	4450	4500	4550	4000
	75	6300	5600	5050	4650	4350	3700	4400	4500	4600	4350	4100	3600
295x85	40	7050	7150	6650	6200	5750	5250	4950	5000	5050	5100	5150	5100
	75	7100	6450	5850	5350	5000	4700	5000	5050	5150	5000	4700	4500
330x85	40	7800	7900	7550	7050	6700	6200	5500	5550	5600	5650	5700	5750
	75	7850	7350	6650	6100	5700	5350	5550	5600	5700	5650	5350	5100
360x85	40	8450	8550	8350	7850	7400	7050	5950	6000	6050	6100	6150	6200
	75	8500	8150	7350	6800	6300	5950	6000	6050	6150	6200	5900	5600
395x85	40	9200	9300	9350	8800	8300	7900	6450	6500	6550	6600	6700	6750
	75	9250	9100	8250	7600	7100	6650	6500	6600	6700	6750	6550	6250
425x85	40	9850	9950	10050	9600	9100	8650	6900	6950	7000	7050	7100	7150
	75	9900	9950	9050	8350	7800	7350	6950	7050	7150	7200	7150	6800
460x85	40	10600	10700	10800	10650	10100	9600	7450	7500	7550	7600	7650	7700
	75	10650	10800	10050	9300	8650	8150	7500	7550	7650	7750	7800	7500
495x85	40	11300	11400	11500	11600	11150	10600	7950	8000	8050	8100	8150	8200
	75	11400	11550	11050	10250	9550	9000	8000	8100	8150	8250	8350	8200
525x85	40	11950	12000	12000	12000	12000	11500	8400	8450	8500	8550	8600	8650
	75	12000	12000	12000	11100	10400	9750	8450	8500	8600	8700	8800	8850
560x85	40	10250	12000	12000	12000	12000	12000	8900	8950	9000	9050	9100	9150
	75	12000	12000	12000	12000	11350	10700	8950	9050	9100	9200	9300	9400
590x85	40	9200	9450	9700	10100	10650	12000	9350	9400	9450	9500	9550	9600
	75	9400	10000	11750	12000	12000	11550	9400	9450	9550	9650	9750	9800

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a maximum ceiling mass of 20 (kg/m^2).
3. Minimum bearing length = 70 mm at end supports.
4. Restraint value for slenderness calculations is 1500 mm
5. Not all sizes of SmartLam GL17 in this table are stocked in each state. Please check with your supplier before ordering

SmartFrame TOOLS



SmartFrame Software

You really do need to see our software to believe it. This state of the art *FREE* software is world leading technology. Not only does it provide the services noted previously, but you also have the benefit of being able to 'size' specific members for your project—fast. No other software package can give you all these benefits at no charge.

Quick Design -
Can't get a particular timber? Just enter the spans and you have a SmartFrame alternative. It's that easy.

Take-Off -
This is the module from which we produce our designs. Either use this yourself, or send the plans to us and we'll do it for you. The take-off is provided in A3 full colour easy to read layouts.

Bracing -
More for Designers and Engineers, this module will work out force summaries for wind bracing and more.

Connection Details -
Ever wondered how to connect an I-Joist to a steel PFC? If you have, this is the module for you. Over 30 different types of connection details all with easy to read graphics and detailed notes.

Select Bracket -
Want to be sure you've got the hardware? Visit 'select bracket' and you'll get all the info you need i.e.: size, the joists it suits and order code. Choose from straight face mount hangers, top mounts, 45° offsets, rafter to ridge hangers and even heavy duty hangers for our LVL.

Tie Down -
A powerful tool to enable users to quickly calculate the uplift forces on a structure and to assign suitable tie down solutions as contained in Chapter 9 of AS 1684

Reports -
Need a certificate report for council? Easy - just switch on your PC, bring up the job and hit the reports button. In one or two minutes, you'll have complete computer generated certifications suitable for most councils and inspectors. Of course, if they aren't satisfied, send the job to us and our Engineer will look over it, ensure it's correct and then issue you an Engineer's Certificate.

SmartFrame Design Service

Tilling offer a comprehensive design service to builders as part of our SmartFrame builders program—at no charge. Simply give us your plans and we'll supply you with the following:

Floor Beam/Post/Lintel Layout - This is clearly show where members go, what they bear onto and how they connect within the frame, all in easy to read colour graphics.

Joist Layout - Showing the layout of joists, bearing points, where to start your layout and other site specific details such as joist hangers and rimboard/end blocking. These layouts can include location of service holes so the tradesman can adjust the joists as necessary.

Member Schedule - Our member schedule illustrates the direction of each member, size, length, count, how it bears left and right and any other information deemed to be needed.

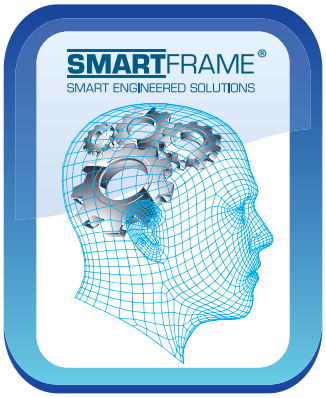
Order Schedule - This is the take off to build the floor. Simply take a look at it to check everything is included, then fax it to your merchant for supply.

Training

Installation Training - It's not always easy for carpenters to keep up to date on new products, however to produce a well built, strong home, it's a necessity. At Tilling, we realize that education and training are lynch pins of the SmartFrame range. If you've ever used our products before, or you've just started a new chippie crew, give us a call. Given either on site, in your office or ours, installation training runs through all the details required to install our joists and LVL, including shortcuts to save time and money. Once again this service is provided at no charge to SmartFrame users. It's all part of the service to ensure you can work with confidence.

SMARTFRAME DESIGN COMPENDIUM

Design Compendium Contents	Interactive	Printable	PC
Specification Software	✓	✓	✓
- Technical Support	✓		✓
Design Guides (pdf)	✓	✓	✓
Technical Illustrations (dxf/dwg for CAD)		✓	✓
Fixing Details - fixing details/hangers (jpg)			✓
Video Clips - installation/company (mpg)			✓
Software Tutorial	✓		✓



Never before has so much user friendly computer power been unleashed into the hands of building industry professionals to allow the design and detailing of engineered timber products. This software, in conjunction with the SmartFrame Design Centre and SmartFrame engineered timber products themselves, combines to form the most sophisticated structural timber option ever available to the Australian market. The SmartFrame Engineered Timber Solution represents an entirely new and revolutionary concept in the delivery of 21st century technology and service to the building industry.

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