SmartLam GL 17
Design Guide

Edition 1 2017

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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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Scope of this publication

This Design Guide and Load Tables assist in the selection of SmartLam GL 17 for some of the common structural arrangements met in domestic 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 technical support Helpline on 1300 668 690 or e-mail at stechsupport@tilling.com

Substitution of other products

All load tables in this document are designed using the characteristic properties of GL 17 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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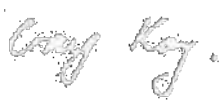
Certification

As a professional engineer, qualified and experienced in timber engineering, I certify that the use of the SmartLam GL 17 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 1720.3 Residential timber-framed construction
- AS 1720.1 Timber structures - design methods
- AS 4055 wind loads for houses
- AS/NZS 4063 Characterisation of structural timber
- AS/NZS 1328 Glue laminated structural tmber - performance requirements and minimum production requirements.
- GLTAA Unified design criteria



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Engineering Manager

The information contained in this product brochure is current as at March 2017 and is based on data available to Tilling Timber Pty Ltd at the time of going to print. Tilling Timber Pty Ltd has used its reasonable endeavours to ensure the accuracy and reliability of the information contained in this document and, to the extent permitted by law, will not be liable for any inaccuracies, omissions or errors in this information nor for any actions taken in reliance on this information. Tilling Timber Pty Ltd reserves the right to change the information contained in this document without prior notice. It is important that you call the technical support customer Helpline on 1300 668 690 to confirm that you have the most up to date information available.

SmartLam® GL 17

Introduction

SmartLam GL 17 beams are manufactured for Tilling Timber by 3rd party audited quality glulam manufacturers to AS/NZS 1328. SmartLam GL 17 Glulam beams are engineered timber products with high strength, dimensional stability, great load carrying capacity and superior fire resistance.

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.

Benefits of SmartLam GL 17®

Cost Effectiveness - SmartLam GL 17 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 GL 17 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 GL 17 beams, installation is fast, easy and efficient.

Environmental responsibility - SmartLam GL 17 beams are made from timber from sustainable managed forests, a natural resource that is friendly to the environment.

Low maintenance - In most applications, SmartLam GL 17 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 B SmartLam GL 17 beams allow you to build timber's natural warmth and beauty into your designs.

Serviceability Criteria

The deflection limits (serviceability) applied in these tables and reproduced in Table 1 below, are in accordance the Glued Laminated Timber Association of Australia (GLTAA) Unified Design Criteria and in some circumstances, differ for those listed in AS 1720.3-2016.

Table 1: GLTAA Serviceability Criteria

Member type	Long term		Short term	
	j_2 x DL	j_2 x (DL+0.5 kPa)	LL	Serviceability WL
Bearers (floor loads only)		L/300 or 12 mm	L/360 or 18 mm	
Bearers (with roof loads)		L/300 or 12 mm	L/360 or 18 mm	L/150
Joists		L/300 or 15 mm	L/360 or 9 mm	
Lintels (with roof loads only)	L/300 or 9 mm		L/250 or 9 mm	L/150
Lintels (with roof and floor)		L/300 or 9 mm	L/360 or 9 mm	L/200
Strutting, hanging, and counter beams	L/300 or 15 mm		L/270 or 15 mm	L/150
Hanging/Strutting, Counter/Strutting beams	L/300 or 12 mm		L/300 or 12 mm	L/150
Roof beams, rafters, hips	L/300 or 20 mm		L/250	L/150
Patio or verandah beams	L/400 or 10 mm		L/250 or 12 mm	L/200

Where:
1. DL = Dead load, LL = Live load, WL = Wind load,
2. j_2 = Creep modification factor Clause 2.4.1.2 AS 1720.1

Ordering SmartLam GL 17

SmartLam GL 17 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

SmartLam GL 17C B grade

"C" indicates pre-camber
"S" indicates no-pre-camber (straight)

Appearance grade

Stock SmartLam GL 17 will be supplied pre-cambered in B grade finish unless otherwise specifically requested.

Protection and handling

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 GL 17 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.

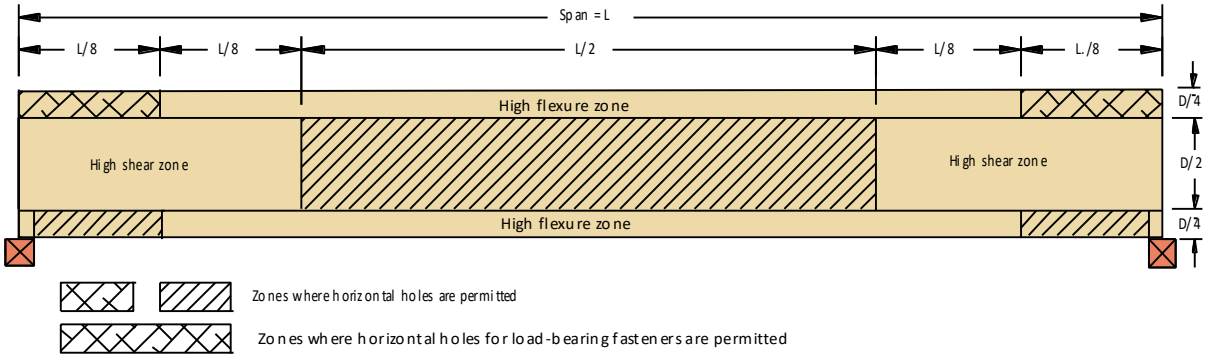
Field drilled horizontal holes should be for access only and should not be used as attachment points for brackets or other load bearing hardware unless specifically designed as such by the Engineer/ Designer.

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.

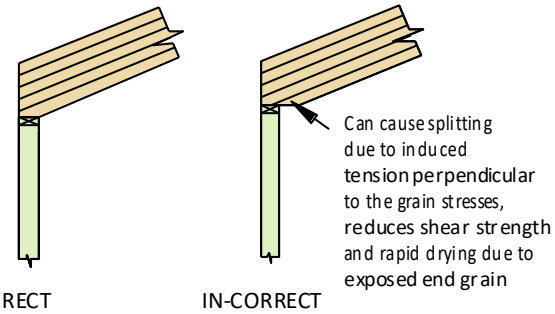
Figure 2 - Zones where horizontal holes are permitted in a uniformly loaded simply supported beam



Installation

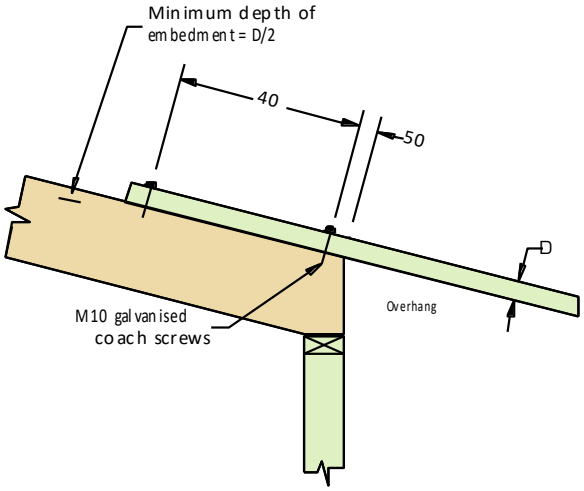
Birdsmouthing

Figure 3 - Birds mouthing details for SmartLam GL 17



Eaves overhang

Figure 4 - Eaves over hang details for SmartLam GL 17



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:

i. Sheet roof - 20% of actual beam span

ii. Tiled roof - 30% of actual beam span

2. Cyclonic Areas

Recommendations as per above, but reduced as follows:

i. Non Birds mouthed - 25% of actual beam span

ii. Birds mouthed-

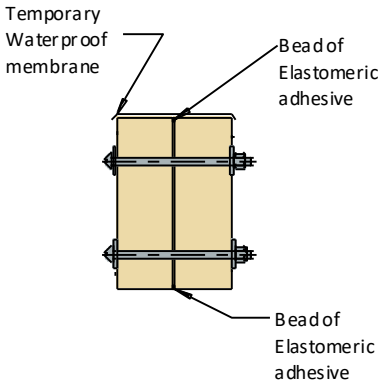
iii. Sheet roof - 10% of actual beam span

iv. Tiled roof - 20% of actual beam span

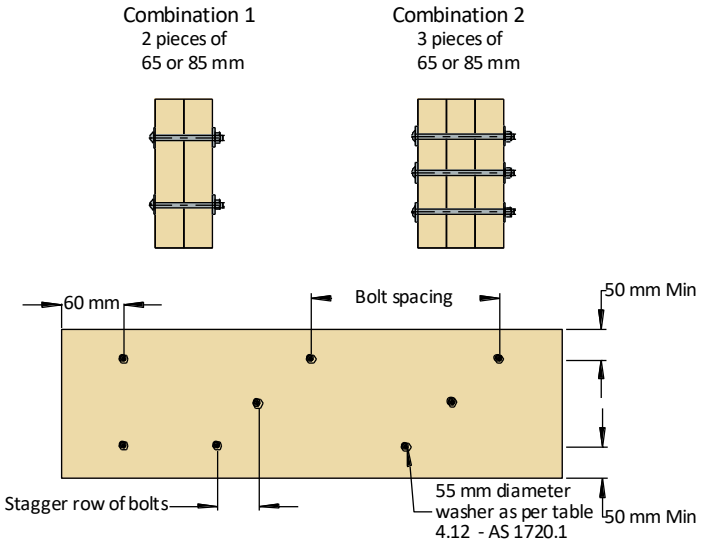
Multiple SmartLam GL 17 section beams

Vertical laminations may be achieved by adopting the principle described in clause 2.3 of AS 1684, however, due to the thickness of SmartLam GL 17, nails are NOT suitable for combining SmartLam GL 17 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 SmartLams.



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 SmartLam GL 17 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

Installation (cont'd)

shown above, the connection is made with bolts, with the allowable floor load width supported by either outside member shown in the table below.

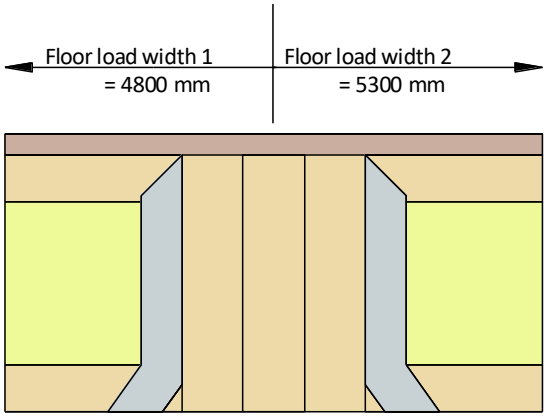
Maximum floor load width supported by either outside member (mm)

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.

How to use the maximum uniform side load table



Example:

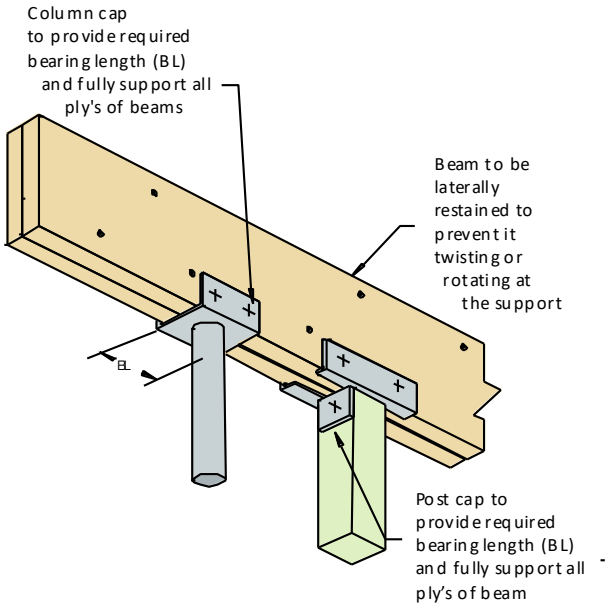
Beam of 2 SmartLam GL 17's loaded on both side (Combination 1)

FLW 1 = 4800 mm, FLW 2 = 5300 mm

Total FLW = 4800 + 5300 = 10100 mm.

1. Use SmartFrame software or these SmartLam GL 17 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

Steel and Timber fixing to SmartLam GL 17



Storage and handling of SmartLam GL 17s

1. Store SmartLam GL 17,s flat on a hard, dry surface
2. If surface isn't paved, the ground should be covered with a polythene film
3. Keep covered with waterproof material that allows bundles to "breathe"
4. Use bearers (bolsters) between the ground and the first bundle (4 metre max spacing)
5. Use 100 x 50 timber flat between bundles at same spacing as bolsters
6. Take great care to rewrap remaining material after opening bundles
7. Timber "grows" in thickness and depth when allowed to get wet....KEEP DRY!
8. Timber products with high MC has short term reduction in Characteristic Strengths .... KEEP DRY!
9. Under NO circumstances is stored SmartLam GL 17 to be in contact with the ground.

Use bearers to keep stacked material away from damp surfaces. Align bearer vertically

SmartLam GL 17 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 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 NZS 3603 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

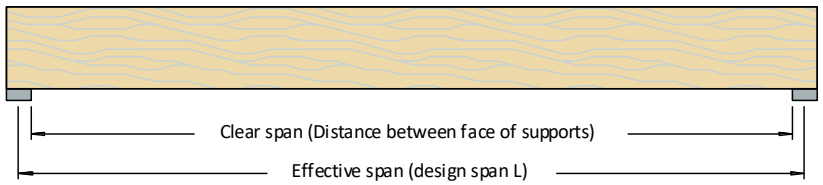
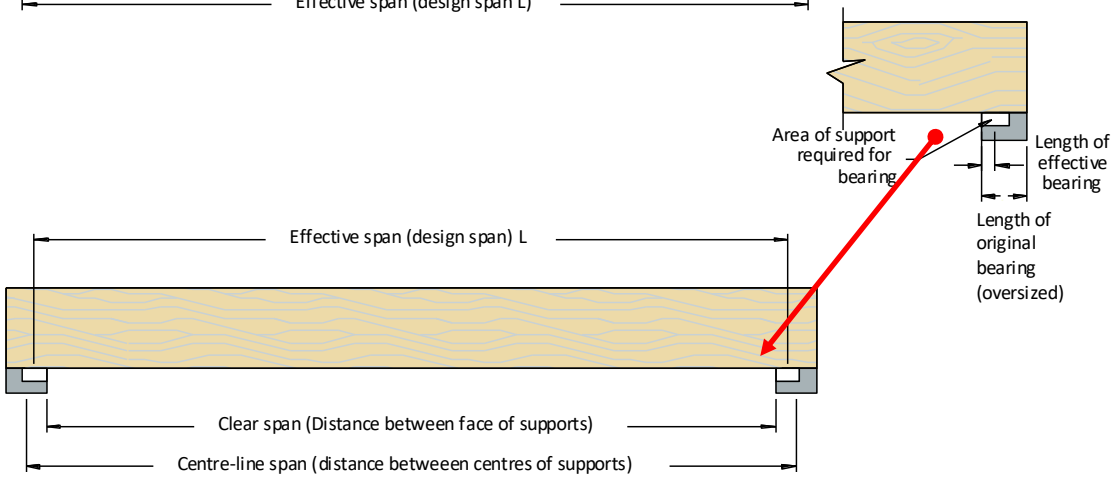


Diagram (b) shows beam where bearings at each end have been oversized. (This is frequently the case for beams that bear onto brickwork or concrete walls where the thickness of the wall is in excess of the area required to give the beam bearing capacity). To find the correct effective span:

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

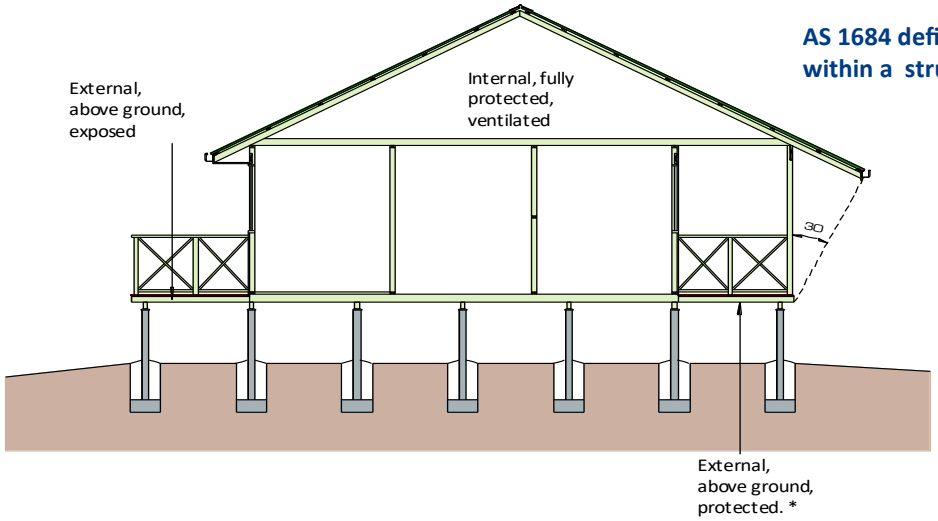


span difference	effective span	resultant span description
10% Max	main span	continuous
10 – 30%	1.1 x main span	continuous
Above 30% difference	main span	single

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

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



AS 1684 definitions of exposure zones within a structure

* 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 durability and weather exposure

SmartLam GL 17s 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 GL 17 protection methods

1. During Construction (pre-water proof roof)

SmartLam GL 17s are supplied WITHOUT any short term construction sealer. However if SmartLam GL 17s 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 17 is installed inside a building without direct exposure to air-conditioning such as in wall cavity, NO protection to the beam is required.

ii. If the SmartLam GL 17 is installed inside a building with direct exposure to air conditioning or dry heat then a sealer is required.

iii. If the SmartLam GL 17 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 17 is exposed to the sun or weather refer to "Exterior Applications" below.

Treatment options

SmartLam GL 17 may be ordered with preservative treatment to the H2 and H3 hazard class for protection against insect attack and biological decay respectively.

Treatment for a service at a higher hazard class satisfies all requirements for service at a lower hazard class. Products treated to H3 therefore meet or exceed the requirements for H1 and H2 applications.

Table 1 of Appendix A in AS/NZS 1604.5 is a guide to hazard classifications for various end-use applications. This table is for guidance only, and only lists limited application.

Example applications

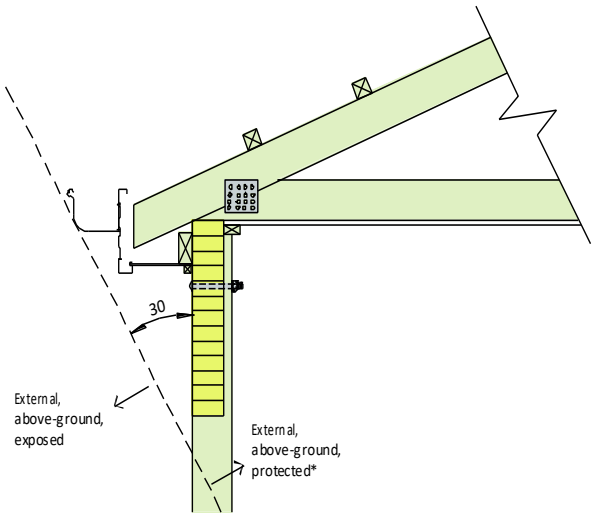
1. Covered alfresco beams

Alfresco beams constructed to comply with the diagram adjacent are technically classified in AS 1684 as ***External, above-ground, protected*** and can be an untreated Class 4 durability timber.

Notwithstanding this, SmartLam GL 17 H3 beams are ideal for alfresco beam applications above for the following reason:

1. H3 treatments provide significantly more resistance to biological attack the untreated wood
2. H3 provides protection against termite attack

A SmartLam H3 in this application must be correctly painted with a premium quality protective finish See **3. Painting treated SmartLam GL 17** below.



* member must also be well detailed and maintained (painted or stained and kept well ventilated)

2. External, above ground, exposed

Untreated SmartLam GL 17s beams must NOT be used in **external, above ground , exposed applications** without the following:

i. H3 treated to AS/NZS 1604.5

ii. Correctly detailed (e.g. End caps, good drainage and ventilation). See "Design & Construction detailing tips" below

iii. Correctly painted as per covered alfresco beam example above

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

3. Painting treated SmartLam GL 17

(a) General

To provide the longest service life of the SmartLam GL 17, it is recommended the SmartLam GL 17s are painted with an exterior paint with a Light Reflectance Value (LRV) greater than 30%. Heat reduction exterior paints should be used where the desired colour is dark or has a LRV of less than 30% The heat reflective paints colours should be limited to a Total Solar Reflectance (TSR) value greater than 29%.

Any paint or stain must be recommended by the manufacturer as being suitable for the proposed application and must be applied in a manner in strict compliance to the manufacturer's recommendations

1. The wood must be dry and clean prior to applying any finish coating. If initial cleaning of the treated wood is needed,

Durability and weather exposure (Cont'd)

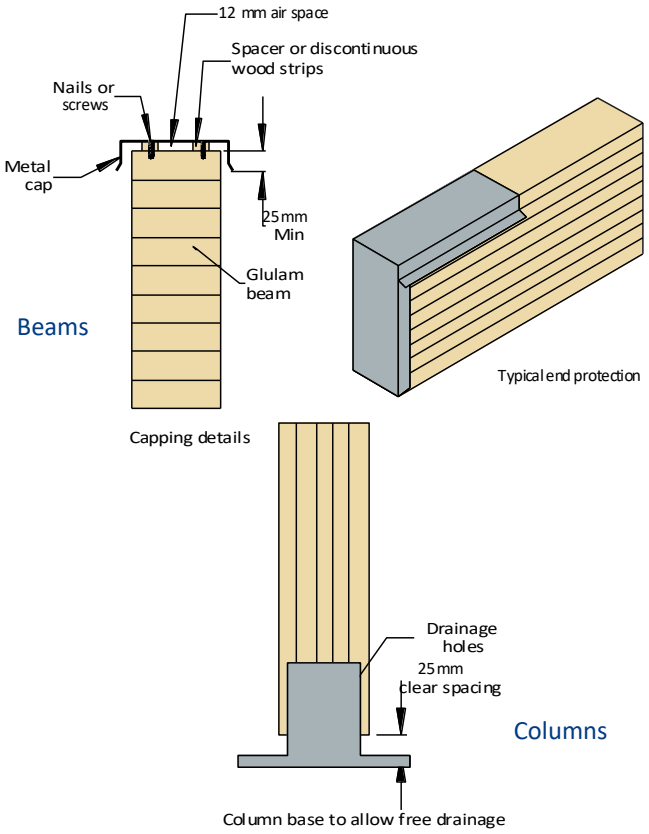
it is recommended that the project be cleaned with a deck cleaning product and allow to fully dry

2. At this time, a clear water repellent can be added to the project. If applied, allow 8 weeks prior to the application of a semi-transparent stain or paint
3. If no water repellent is added, an oil based stain can be applied to the clean, dry wood in 30-60 days from treatment date.
4. A water based stain can be applied to the clean, dry wood in 45-70 days from treatment date.
5. Depending on the treatment method used, if the wood is left uncoated and without UV protection:
6.
   i. The typical brown colour of the Copper Quat treated wood will naturally weather to a grey colour over long-term exposure to the sun
   ii. The Azole treated wood has no colouration so it will naturally weather to a grey colour over long-term exposure to the sun

Users must always conduct their own tests on coatings in inconspicuous areas of the project to determine acceptability of colour, adhesion and appearance.

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 opposite.
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.



Fire ratings (resistance)

The Fire Resistance Level (FRL) of an object is expressed as the number of minutes for which the specimen fulfils the requirements of each of the three criteria, being:

i. Structural adequacy
ii. Integrity; and
iii. Insulation, and expressed in that order

under test conditions.

In a fire, SmartLam GL 17 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 GL 17 beam can carry the dead load of the structure for a period of time.

The Structural Adequacy Resistance to fire can be established by reference to AS 1720.4.

Notional charring rate $c = 0.4 + \left(\frac{280}{\delta}\right)^2$

Where d = timber density at a moisture content of 12%, in kg/m^3. For SmartLam GL 17s, this equates to a char rate of 0.54 mm per minute.

The Structural Adequacy Fire resistance period can be determined by performing a series of successive iterations of time. The calculated value is reached when the effective residual section is no longer capable of resisting the design loads.

NOTE: this calculation is for the structural adequacy component of the FRL ONLY. More information on the determination of the FRL go to www.woodsolutions.com.au .

Checking in SmartLam GL 17

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 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.

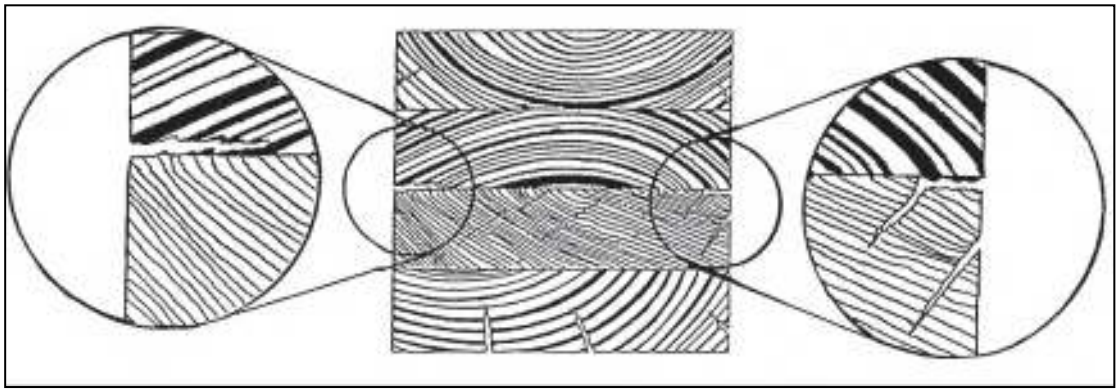
Checks are usually not of structural importance unless they are significant in depth, occur in the mid-height of the member near the supports, and the design of the member is governed by shear. If these conditions exist, the reduction in shear strength is directly proportional to the ratio of the depth 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.**



Designing with SmartLam GL 17

The design information contained within this Design Guide is for the properties of SmartLam GL 17 only. Other manufacturers' LVL may have different properties and therefore cannot be designed using this information.

1. Product Specification

Lamella:	Thickness:	30-45 mm
	Species:	Various softwood and some hardwood species
	Strength Group	SD4
	Joints:	Finger joint
Dimensional tolerances:	Length:	± 10 mm
	Depth:	≤ 100 mm ± 1 mm ≥ 100 ≤ 302 mm ± 3 mm ≥ 301 ≤ 600 mm ± 4 mm ≥ 601 ± 6 mm
	Thickness:	- 0, +4 mm at 12% moisture content
Adhesive:	Complies with AS/NZS 4364:2010	
Treatment: options:	Untreated, H2, and H3 treatment to AS 1604.5	

2. Limit State Design Characteristic Properties

(1) Dry conditions

Timber Strength Properties:(1)		
Bending	f'_b	40 MPa
Tension Parallel to grain	f'_t	20 MPa
Tension Perpendicular to grain	f'_{tp}	0.5 MPa
Compression Parallel to grain	f'_c	33 MPa
Compression Perpendicular to grain - Edge	f'_p	13 MPa
Shear	f'_s	4.2 MPa
Average Elastic Modulus	E	16,700 MPa
Average Modulus of Rigidity	G	1110 MPa
Average Density		650 kg/m^3
Moisture Content		12-15%

3. Strength reduction factor

The strength reduction factor for calculating the design capacities of structural members shall be taken from the table below, referenced from AS 1720.1 –2010

Application of SmartLam GL 17 as a structural member		
Category 1	**Category 2**	**Category 3**
Structural members for houses for which failure would be unlikely to affect an area greater than 25 m^2; OR secondary members in structures other than houses	Primary structural members in structures other than houses; OR elements in houses for which failure would be likely to affect an area* greater than 25 m^2	Primary structural members in structures intended to fulfil essential services or post disaster function
Strength reduction factor Ø *		
0.95	0.85	0.75

* AS 1720.1:2010 Table 2.1

4. Duration of load

The duration of load factor k_1 for strength is defined within clause 2.4 of AS 1720.1.

Duration	Service class / exposure classification		
	1, 2	3	Severe/ Adverse
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.
2. In general, the size of this beam can conservatively be obtained by the following method:
   - i. Obtain the beam size for service class 1 & 2
   - ii. Obtain the EI_{xx} from the "Section Properties" table for this beam
   - iii. Obtain from the "Section Properties" table a beam size with an EI_{xx} => 2/1.5 x EI_{xx} of the original beam
   - iv. Follow the recommendations of the GLTAA Technical Data Sheet No 2: "Glulam in weather exposed applications"
3. Service Classes 1,2 & 3 are defined in AS 1328

5. Partial seasoning factor

SmartLam GL 17 is a seasoned timber product, generally k_4 equals 1. Where the glulam is subjected to conditions in which the average moisture content for a 12 month period is expected to exceed 15%, the characteristic capacity shall be decreased. The value of k_4 shall be the greater of:

a. $k_4 = 1 - 0.3\frac{EMC - 15}{10}$;

b. $k_4 = 0.7$

Where EMC is the highest value of the annual moisture content (percent) that the timber will attain in service.

6. Length and position of bearing

The k_7 bearing factor is defined is clause 2.4.4 of AS 1720.1

7. Load sharing

Because of the reduced variability of strength values of glulam compared to solid timber , the load sharing factor k_9 = 1.0 as defined in clause 7.4.3 of AS 1720.1

8. Stability

The stability factor k_{12} is defined within section 7 of AS 1720.1 beams. The methods for calculating k_{12} for solid wood in section 3 of AS 1720.1 shall generally apply except that the material constant (ρ_b or ρ_c) for beams and column shall be as given in Tables 7.2(A) and 7.2(B)

9. Temperature

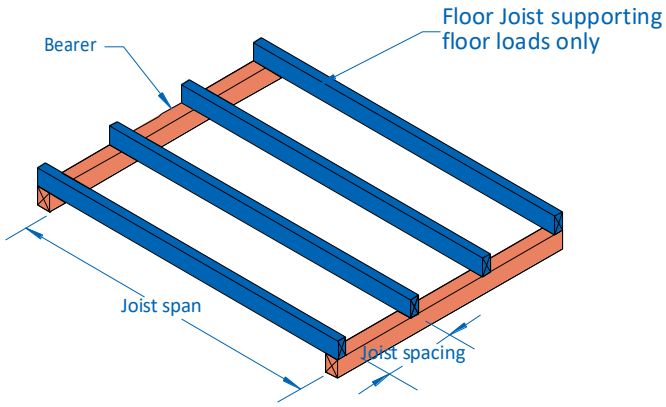
For covered timber structures under ambient conditions, no modification for strength need be made for the effect of temperature (i.e., k_6 equals 1.0) except that where seasoned timber is used in structures erected in coastal regions of Queensland north of latitude 25°S, and all other regions of Australia north of latitude 16°S, the strength shall be modified by a factor k_6 of 0.9.

SmartLam GL 17 section properties

Nominal Size DxB mm	Beam mass kg/m	Nominal section area 10^3 mm^2	Major axis			Minor Axis	
			Zxx 10^3 mm^2	Ixx 10^6 mm^4	EIxx 10^9 Nmm^2	Zyy 10^3 mm^2	Iyy 10^6 mm^4
130 x 65	4.6	8.5	183	12	199	91.5	3.0
165 x 65	5.9	10.7	295	24	406	116.2	3.8
195 x 65	7.0	12.7	412	40	671	137.3	4.5
230 x 65	8.2	15.0	573	66	1101	162.0	5.3
260 x 65	9.3	16.9	732	95	1590	183.1	6.0
295 x 65	10.5	19.2	943	139	2322	207.7	6.8
300 x 65	10.7	19.5	975	146	2442	211.3	6.9
330 x 65	11.8	21.5	1180	195	3251	232.4	7.6
360 x 65	12.9	23.4	1404	253	4220	253.5	8.2
395 x 65	14.1	25.7	1690	334	5575	278.1	9.0
425 x 65	15.2	27.6	1957	416	6944	299.3	9.7
130 x 85	6.1	11.1	239	16	260	156.5	6.7
165 x 85	7.7	14.0	386	32	531	198.7	8.4
195 x 85	9.1	16.6	539	53	877	234.8	10.0
230 x 85	10.8	19.6	749	86	1439	277.0	11.8
295 x 85	13.8	25.1	1233	182	3037	355.2	15.1
330 x 85	15.4	28.1	1543	255	4251	397.4	16.9
360 x 85	16.8	30.6	1836	330	5519	433.5	18.4
395 x 85	18.5	33.6	2210	437	7290	475.6	20.2
425 x 85	19.9	36.1	2559	544	9081	511.8	21.8
460 x 85	21.5	39.1	2998	689	11514	553.9	23.5
495 x 85	23.1	42.1	3471	859	14347	596.1	25.3
525 x 85	24.5	44.6	3905	1025	17117	632.2	26.9
560 x 85	26.2	47.6	4443	1244	20774	674.3	28.7
590 x 85	27.6	50.2	4931	1455	24295	710.5	30.2
295 x 115	18.7	33.9	1668	246	4109	650.2	37.4
330 x 115	20.9	38.0	2087	344	5751	727.4	41.8
360 x 115	22.8	41.4	2484	447	7467	793.5	45.6
395 x 115	25.0	45.4	2990	591	9863	870.6	50.1
425 x 115	26.9	48.9	3462	736	12286	936.8	53.9
460 x 115	29.1	52.9	4056	933	15578	1013.9	58.3
495 x 115	31.3	56.9	4696	1162	19411	1091.1	62.7
525 x 115	33.2	60.4	5283	1387	23159	1157.2	66.5
560 x 115	35.4	64.4	6011	1683	28106	1234.3	71.0
590 x 115	37.3	67.9	6672	1968	32869	1300.5	74.8
295 x 135	21.9	39.8	1958	289	4823	896.1	60.5
330 x 135	24.5	44.6	2450	404	6752	1002.4	67.7
360 x 135	26.7	48.6	2916	525	8765	1093.5	73.8
395 x 135	29.3	53.3	3511	693	11579	1199.8	81.0
425 x 135	31.6	57.4	4064	864	14422	1290.9	87.1
460 x 135	34.2	62.1	4761	1095	18287	1397.3	94.3
495 x 135	36.8	66.8	5513	1364	22787	1503.6	101.5
525 x 135	39.0	70.9	6202	1628	27186	1594.7	107.6
560 x 135	41.6	75.6	7056	1976	32994	1701.0	114.8
590 x 135	43.8	79.7	7832	2311	38586	1792.1	121.0

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 GL 17C - 260 x 65

Loadings: Permanent - Self weight + 40 kg/m^2 +0.5 kPa of the live load, live load - 1.5 kPa or floor point load of 1.8 kN

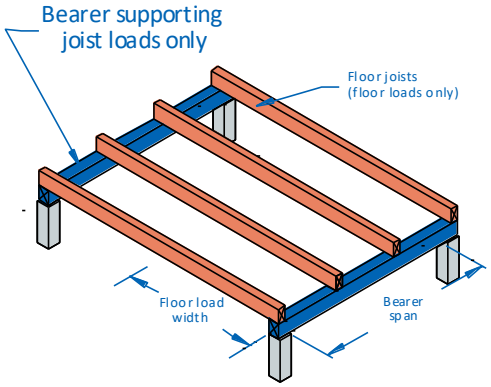
Joist spacing (mm)	300	450	600	300	450	600
Member size (GL17C) DxB (mm)	Maximum recommended joist span (mm)					
	Single span			Continuous span		
130x65	4200	3350	3050	4850	4050	3550
165x65	5000	4400	3950	5800	5250	4600
195x65	5650	5100	4700	6600	5950	5550
230x65	6400	5800	5400	7450	6750	6250
260x65	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	10800	9950	9950	12000	10300	9950
590x65	10750	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	11000	9950	9950	12000	10500	9950
560x85	10700	9950	9950	12000	11000	10250
590x85	10050	10200	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 GL 17 in this table are stocked in each state. Please check with your supplier before ordering

Single span floor bearers supporting floor loads only - Single span

Floor mass - 40 kg/m^2



EXAMPLE:

single span bearer = 4000 mm
floor load width = 5800 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 GL 17 C - 360 x 65
(With additional bearing length of 10 mm)

Loadings: permanent - self weight + 40 kg/m^2 +0.5 kPa of the live load, live load - 1.5 kPa or floor point load of 1.8 kN

Floor load width (mm)	1200	1800	2400	3000	3600	4200	4800	5400	6000	6600
Member size (GL17C) DxB (mm)	Maximum recommended Single span bearer span (mm)									
130x65	2850	2500	2250	2100	2000	1850	1800	1700	1600	1500
165x65	3650	3200	2900	2700	2500	2400	2250	2150	2000	1900
195x65	4300	3750	3400	3150	3000	2850	2700	2550	2400	2250
230x65	4950	4400	4050	3750	3500	3350	3150	3000	2800	2700
260x65	5500	4900	4500	4200	4000	3800	3600	3350	3200	3050
295x65	6150	5500	5050	4700	4450	4250	4050	3800	3600_{5}	3450_{5}
330x65	6850	6050	5550	5200	4900	4650	4500_{5}	4250_{5}	4050_{10}	3850_{10}
360x65	7450	6550	6000	5600	5300	5050	4850_{5}	4650_{10}	4400_{15}	4200_{15}
395x65	8100	7150	6550	6100	5750	5450_{5}	5250_{10}	5050_{15}	4850_{20}	4600_{20}
425x65	8550	7700	7000	6500	6150_{5}	5850_{10}	5600_{15}	5400_{20}	5200_{20}	4950_{25}
460x65	9050	8200	7550	7000	6600_{5}	6300_{10}	6000_{15}	5800_{20}	5600_{25}	5350_{30}
165x85	4000	3500	3150	2950	2750	2600	2500	2400	2300	2200
195x85	4650	4100	3750	3450	3250	3100	2950	2850	2750	2600
230x85	5350	4750	4350	4100	3850	3650	3500	3350	3200	3050
260x85	5950	5300	4850	4550	4300	4100	3950	3800	3650	3450
295x85	6650	5900	5400	5050	4800	4550	4400	4250	4100	3900
330x85	7400	6550	6000	5600	5300	5050	4850	4650	4500	4350_{5}
360x85	8050	7100	6500	6050	5700	5450	5200	5000	4850_{5}	4700_{10}
395x85	8650	7750	7100	6600	6200	5900	5650	5450_{5}	5250_{10}	5100_{10}
425x85	9150	8250	7600	7050	6650	6350	6050_{5}	5800_{10}	5600_{10}	5450_{15}
460x85	9700	8750	8150	7650	7200	6800_{5}	6500_{10}	6250_{10}	6050_{15}	5850_{20}
495x85	10250	9250	8600	8150	7700	7300_{5}	7000_{10}	6700_{15}	6450_{20}	6250_{25}
525x85	10700	9700	9000	8500	8150_{5}	7750_{10}	7400_{15}	7100_{20}	6850_{25}	6600_{25}
295x115	7250	6450	5900	5500	5200	5000	4750	4600	4450	4300
330x115	8100	7150	6550	6100	5750	5500	5250	5050	4900	4750
360x115	8700	7750	7100	6600	6250	5950	5700	5500	5300	5100
395x115	9350	8450	7750	7200	6800	6450	6200	5950	5750	5550
425x115	9850	8900	8300	7750	7300	6950	6650	6350	6150	5950_{5}
460x115	10450	9450	8800	8300	7900	7500	7150	6850	6600_{5}	6400_{10}
495x115	11050	10000	9300	8800	8400	8050	7650	7350_{5}	7100_{10}	6850_{10}
525x115	11550	10450	9700	9200	8800	8450	8150_{5}	7800_{10}	7500_{10}	7250_{15}
560x115	12000	10950	10200	9650	9200	8850_{5}	8550_{5}	8300_{10}	8000_{15}	7750_{20}
590x115	12000	11400	10600	10000	9600	9200_{5}	8900_{10}	8650_{15}	8450_{20}	8150_{20}
260x135	6750	6000	5500	5150	4900	4650	4500	4300	4200	4050
295x135	7600	6750	6200	5800	5450	5200	5000	4800	4650	4500
330x135	8450	7500	6850	6400	6050	5750	5500	5300	5150	4950
360x135	9050	8150	7450	6950	6550	6250	5950	5750	5550	5350
395x135	9700	8800	8150	7600	7150	6800	6500	6250	6000	5850
425x135	10250	9250	8650	8150	7650	7300	6950	6700	6450	6250
460x135	10900	9850	9150	8650	8250	7850	7500	7200	6950	6700_{5}
495x135	11500	10400	9650	9150	8750	8400	8050	7750	7450_{5}	7200_{5}
525x135	12000	10850	10100	9550	9150	8800	8500	8200_{5}	7900_{5}	7650_{10}
560x135	12000	11400	10600	10050	9600	9200	8900	8650_{5}	8450_{10}	8150_{15}
590x135	12000	11850	11050	10450	9950	9600	9300_{5}	9000_{10}	8750_{10}	8550_{15}

Continuous span floor bearers supporting floor loads only

Floor mass - 40 kg/m^2

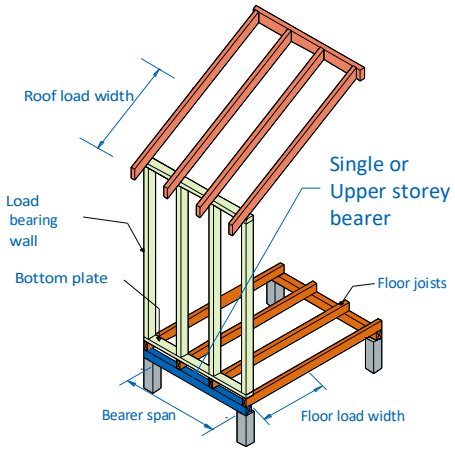
Loadings: permanent - self weight + 40 kg/m^2 +0.5 kPa of the live load, live load - 1.5 kPa or floor point load of 1.8 kN

Floor load width (mm)	1200	1800	2400	3000	3600	4200	4800	5400	6000	6600
Member size (GL17C) DxB (mm)	Maximum recommended Continuous span bearer span (mm)									
130x65	3500	2950	2550	2300	2100	1900	1800	1700	1600	1500
165x65	4450	3750	3250	2900	2650	2450	2250	2150	2000	1900
195x65	5050	4450	3850	3400	3100	2900	2700	2550	2400_{5}	2250_{10}
230x65	5700	5150	4500	4050	3700	3400_{5}	3150_{10}	3000_{15}	2800_{15}	2700_{20}
260x65	6250	5650	5100	4550	4150_{5}	3850_{10}	3600_{20}	3350_{20}	3200_{30}	3050_{30}
295x65	6850	6200	5750	5150_{10}	4700_{15}	4350_{20}	4050_{30}	3800_{35}	3600_{40}	3450_{45}
330x65	7400	6750	6250_{5}	5800_{15}	5250_{25}	4850_{30}	4550_{40}	4250_{45}	4050_{50}	3850_{60}
360x65	7900	7200	6700_{10}	6300_{25}	5750_{35}	5300_{40}	4950_{50}	4650_{55}	4400_{65}	4200_{70}
395x65	8450	7700	7150_{15}	6750_{30}	6300_{40}	5800_{50}	5400_{60}	5100_{70}	4850_{80}	4600_{95}
425x65	8900	8100_{5}	7550_{20}	7150_{35}	6750_{50}	6250_{60}	5850_{70}	5500_{85}	5200_{100}	4950_{105}
460x65	9450	8600_{10}	8000_{25}	7550_{45}	7200_{60}	6750_{70}	6300_{90}	5950_{105}	5600_{110}	5350_{120}
165x85	4750	4250	3700	3300	3000	2800	2600	2450	2300	2200
195x85	5400	4850	4400	3900	3550	3300	3050	2900	2750	2600
230x85	6050	5500	5100	4600	4200	3900	3600	3400_{5}	3200_{5}	3050_{10}
260x85	6650	6000	5600	5200	4750	4400_{5}	4100_{5}	3850_{10}	3650_{15}	3450_{20}
295x85	7250	6600	6150	5800	5350_{5}	4950_{10}	4650_{15}	4350_{20}	4100_{25}	3900_{30}
330x85	7900	7150	6700	6300_{5}	6000_{15}	5550_{20}	5200_{25}	4850_{30}	4600_{35}	4400_{45}
360x85	8400	7650	7100	6750_{10}	6400_{20}	6050_{30}	5650_{35}	5300_{40}	5050_{45}	4800_{55}
395x85	8950	8150	7600	7200_{15}	6900_{25}	6600_{35}	6200_{45}	5800_{50}	5500_{60}	5250_{65}
425x85	9450	8600	8050_{5}	7600_{20}	7250_{30}	6950_{40}	6650_{50}	6250_{60}	5950_{70}	5650_{80}
460x85	10000	9100	8500_{10}	8050_{25}	7700_{35}	7400_{50}	7150_{60}	6800_{75}	6400_{85}	6100_{100}
495x85	10500	9600	9000_{15}	8500_{30}	8100_{40}	7800_{55}	7550_{70}	7300_{95}	6900_{100}	6550_{110}
525x85	10950	10050_{5}	9350_{20}	8900_{35}	8500_{45}	8150_{60}	7850_{80}	7600_{100}	7300_{110}	6950_{120}
295x115	7750	7050	6600	6250	5950	5700	5400_{5}	5050_{10}	4800_{15}	4550_{20}
330x115	8400	7650	7150	6800	6450	6200_{5}	6000_{15}	5650_{20}	5350_{25}	5100_{30}
360x115	8950	8150	7650	7200	6900_{5}	6650_{10}	6400_{20}	6150_{25}	5850_{30}	5550_{35}
395x115	9550	8750	8150	7750	7400_{10}	7100_{15}	6850_{25}	6650_{35}	6400_{40}	6100_{45}
425x115	10050	9200	8600	8150	7800_{10}	7500_{20}	7250_{30}	7000_{40}	6800_{45}	6550_{55}
460x115	10600	9750	9100	8650_{5}	8250_{15}	7950_{25}	7650_{35}	7450_{45}	7200_{55}	7050_{65}
495x115	11150	10250	9600	9100_{10}	8700_{20}	8400_{30}	8100_{40}	7850_{50}	7600_{60}	7450_{75}
525x115	11650	10700	10000	9500_{15}	9100_{25}	8750_{35}	8450_{45}	8200_{55}	7950_{70}	7750_{85}
560x115	12000	11200	10500_{5}	9950_{20}	9550_{30}	9150_{40}	8850_{50}	8600_{65}	8350_{80}	8150_{100}
590x115	12000	11600	10900_{10}	10350_{20}	9900_{35}	9500_{45}	9200_{55}	8900_{70}	8700_{90}	8450_{105}
260x135	7350	6700	6250	5900	5650	5400	5150	4850	4550	4350_{5}
295x135	8000	7350	6850	6500	6200	5950	5750	5500_{5}	5200_{10}	4950_{10}
330x135	8700	7950	7450	7050	6700	6450	6250_{5}	6050_{10}	5800_{15}	5500_{20}
360x135	9250	8450	7900	7500	7150	6900_{5}	6650_{10}	6450_{15}	6250_{25}	6000_{30}
395x135	9850	9050	8450	8000	7650	7350_{5}	7100_{15}	6900_{25}	6700_{30}	6550_{35}
425x135	10350	9500	8900	8450	8100_{5}	7800_{10}	7500_{20}	7300_{30}	7100_{35}	6900_{45}
460x135	10950	10050	9450	8950	8550_{10}	8250_{15}	7950_{25}	7700_{35}	7500_{40}	7300_{50}
495x135	11500	10600	9950	9450	9050_{10}	8700_{20}	8400_{30}	8150_{40}	7900_{45}	7700_{55}
525x135	12000	11050	10400	9850_{5}	9450_{15}	9050_{25}	8750_{35}	8500_{45}	8250_{50}	8050_{60}
560x135	12000	11550	10850	10300_{10}	9900_{20}	9500_{30}	9200_{40}	8900_{50}	8650_{60}	8450_{70}
590x135	12000	12000	11250	10700_{10}	10250_{25}	9900_{35}	9550_{45}	9250_{55}	9000_{65}	8800_{75}

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 GL 17 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
Single span



Floor mass - 40 kg/m^2

EXAMPLE:

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

Enter single span table at 4800 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 GL 17C — 260 x 65

Floor load width (mm)	Roof mass (kg/m^2)	1200			2400			4800		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17C) DxB (mm)		Maximum recommended single span bearer span (mm)								
130x65	40	2200	1900	1750	1950	1750	1650	1600	1500	1450
	75	2050	1700	1500	1850	1600	1450	1550	1450	1300
165x65	40	2800	2450	2250	2450	2250	2100	2050	1950	1850
	75	2650	2200	1950	2350	2050	1850	2000	1850	1700
195x65	40	3350	2950	2700	2950	2700	2500	2450	2350	2200
	75	3150	2600	2300	2800	2450	2200	2400	2200	2000
230x65	40	3900	3500	3200	3500	3200	2950	2950	2750	2650
	75	3700	3100	2750	3350	2900	2650	2850	2600	2400
260x65	40	4300	3900	3600	3900	3650	3400	3350	3150	3000
	75	4100	3550	3150	3750	3300	3000	3250	2950	2750
295x65	40	4800	4350	4000	4350	4050	3800	3750	3600	3400_{5}
	75	4550	3950	3600	4200	3750	3400	3700	3350_{5}	3150_{5}
330x65	40	5300	4750	4400	4800	4450	4200	4150_{5}	3950_{5}	3800_{10}
	75	5050	4350	3950	4600	4100	3800	4050_{5}	3750_{10}	3500_{10}
360x65	40	5700	5150	4750	5150	4750	4500	4450_{10}	4250_{10}	4100_{10}
	75	5450	4650	4250	4950	4400	4100_{5}	4350_{10}	4050_{15}	3800_{15}
395x65	40	6250	5600	5150	5600	5200	4850	4850_{10}	4600_{15}	4400_{15}
	75	5900	5050	4600	5400	4800	4400_{5}	4700_{15}	4350_{15}	4100_{20}
425x65	40	6650	5950	5500	6000	5500	5200	5150_{15}	4900_{20}	4700_{20}
	75	6300	5400	4900_{5}	5750	5100	4700_{10}	5050_{15}	4650_{20}	4350_{25}
165x85	40	3050	2700	2450	2700	2450	2300	2250	2150	2050
	75	2900	2400	2150	2600	2250	2050	2200	2000	1850
195x85	40	3650	3250	2950	3250	2950	2750	2700	2550	2450
	75	3450	2850	2550	3100	2700	2450	2650	2400	2200
230x85	40	4200	3800	3500	3800	3500	3250	3200	3050	2900
	75	4000	3400	3050	3650	3200	2900	3150	2850	2650
260x85	40	4650	4200	3900	4200	3900	3700	3650	3450	3300
	75	4400	3800	3450	4050	3650	3300	3550	3250	3000
295x85	40	5200	4650	4350	4650	4350	4100	4050	3850	3700
	75	4900	4250	3850	4500	4050	3700	3950	3700	3450
330x85	40	5700	5150	4750	5150	4800	4500	4450	4250	4100
	75	5450	4700	4250	4950	4450	4100	4350	4050	3800_{5}
360x85	40	6200	5550	5150	5550	5150	4850	4800	4600	4400_{5}
	75	5900	5050	4600	5350	4750	4400	4700	4350_{5}	4100_{5}
395x85	40	6750	6050	5600	6050	5600	5250	5200_{5}	4950_{5}	4750_{5}
	75	6400	5500	4950	5850	5150	4750	5100_{5}	4700_{5}	4450_{10}
425x85	40	7250	6450	6000	6500	6000	5600	5550_{5}	5300_{10}	5100_{10}
	75	6850	5850	5300	6250	5500	5100	5450_{5}	5000_{10}	4700_{15}
460x85	40	7800	7000	6450	7000	6450	6050	6000_{10}	5700_{10}	5450_{15}
	75	7400	6300	5700	6700	5950	5450_{5}	5850_{10}	5400_{15}	5050_{20}
495x85	40	8400	7500	6900	7500	6900	6450	6400_{15}	6100_{15}	5800_{15}
	75	7950	6750	6050_{5}	7200	6350	5800_{10}	6250_{15}	5750_{20}	5400_{20}

Floor bearers supporting single storey load bearing wall - sheet and tiled roof Single span (cont'd)

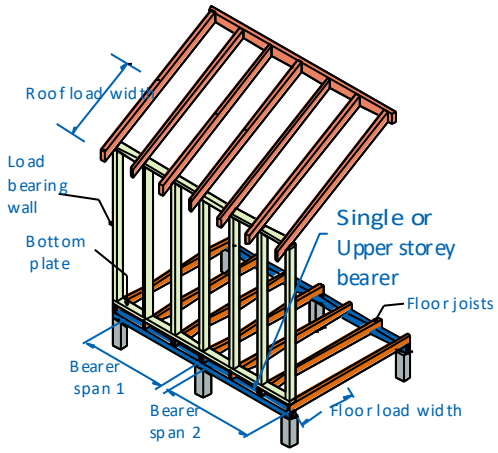
Floor load width (mm)	Roof mass (kg/m^2)	1200			2400			4800		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17C) DxB (mm)		Maximum recommended single span bearer span (mm)								
230x115	40	4550	4100	3800	4100	3850	3600	3600	3400	3200
	75	4350	3750	3350	4000	3550	3200	3500	3150	2950
260x115	40	5050	4550	4250	4550	4250	4000	3950	3800	3650
	75	4800	4150	3800	4400	3950	3650	3900	3600	3350
295x115	40	5650	5100	4700	5100	4700	4450	4400	4200	4050
	75	5350	4600	4200	4900	4400	4050	4300	4000	3750
330x115	40	6250	5600	5200	5600	5200	4900	4850	4650	4450
	75	5950	5100	4600	5400	4800	4450	4750	4400	4150
360x115	40	6750	6050	5600	6100	5600	5300	5250	5000	4800
	75	6400	5500	5000	5850	5200	4800	5150	4750	4450
395x115	40	7400	6600	6100	6600	6100	5750	5700	5400	5200
	75	7000	6000	5400	6400	5650	5200	5550	5150	4800
425x115	40	7950	7100	6550	7100	6550	6150	6100	5800	5550
	75	7500	6400	5800	6850	6050	5550	5950	5500	5150_5
460x115	40	8600	7650	7050	7650	7050	6600	6550	6250	5950_5
	75	8100	6900	6200	7350	6500	5950	6400	5900_5	5500_5
495x115	40	9250	8250	7550	8250	7600	7100	7050_5	6650_5	6400_5
	75	8750	7400	6650	7900	6950	6350	6850_5	6300_5	5900_{10}
525x115	40	9850	8750	8000	8750	8050	7500	7450_5	7050_{10}	6750_{10}
	75	9300	7850	7050	8400	7350	6750	7250_5	6650_{10}	6250_{15}
560x115	40	10550	9350	8550	9350	8550	8000	7950_{10}	7500_{10}	7200_{15}
	75	9950	8350	7500	8950	7850	7150_5	7750_{10}	7100_{15}	6600_{15}
230x135	40	4750	4300	4000	4300	4000	3750	3750	3550	3400
	75	4500	3900	3550	4150	3700	3400	3650	3350	3100
260x135	40	5300	4750	4450	4750	4450	4200	4150	3950	3800
	75	5000	4350	3950	4600	4100	3800	4050	3750	3550
295x135	40	5900	5300	4950	5300	4950	4650	4600	4400	4250
	75	5600	4850	4400	5150	4600	4200	4500	4200	3950
330x135	40	6550	5900	5450	5900	5450	5150	5100	4850	4650
	75	6200	5350	4850	5700	5050	4650	4950	4600	4350
360x135	40	7100	6350	5900	6350	5900	5550	5500	5250	5000
	75	6750	5750	5200	6150	5450	5000	5350	4950	4650
395x135	40	7750	6950	6400	6950	6400	6000	5950	5700	5450
	75	7350	6300	5650	6700	5900	5450	5850	5400	5050
425x135	40	8350	7450	6850	7450	6850	6450	6400	6050	5800
	75	7900	6700	6050	7150	6350	5800	6250	5750	5400
460x135	40	9050	8050	7400	8050	7400	6950	6900	6550	6250
	75	8550	7250	6500	7750	6800	6250	6700	6200	5800
495x135	40	9750	8650	7950	8650	7950	7450	7400	7000	6700
	75	9200	7800	7000	8350	7300	6700	7200	6600	6200_5
525x135	40	10350	9200	8450	9200	8450	7900	7800	7400_5	7100_5
	75	9800	8250	7400	8850	7750	7100	7650	7000_5	6550_{10}
560x135	40	11100	9850	9000	9850	9050	8450	8350_5	7900_5	7550_5
	75	10500	8800	7900	9450	8250	7550	8150_5	7450_{10}	6950_{10}
590x135	40	11750	10400	9500	10400	9550	8900	8800_5	8350_{10}	7950_{10}
	75	11100	9300	8300	10000	8700	7950_5	8600_{10}	7850_{10}	7300_{15}

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), 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.
3. The above table was based on a wall height of 2700.
4. 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.
5. Restraint value for slenderness calculations is 600 mm.
6. Not all sizes of SmartLam GL 17 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 mass - 40 kg/m^2



EXAMPLE:

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

Enter single span table at 4800 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 GL 17C - 260 x 65

Floor load width (mm)		1200			2400			4800		
Roof load width (mm)	Roof mass (kg/m^2)	1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17C) DxB (mm)		Maximum recommended continuous span bearer span (mm)								
130x65	40	2850	2500	2250	2250	2100	1950	1700	1600	1550
	75	2700	2150	1800	2200	1900	1700	1650	1500	1450
165x65	40	3600	3200	2850	2850	2650	2500	2150	2050	1950
	75	3400	2750	2300	2750	2450	2150	2100	1950	1800
195x65	40	4100	3750	3350	3400	3150	2950	2500	2400_{5}	2300_{5}
	75	3900	3250	2750	3250	2900	2550	2450	2300_{10}	2150_{15}
230x65	40	4600	4200	3950	4000	3700	3450	2950_{15}	2850_{15}	2750_{20}
	75	4400	3800	3200_{5}	3850	3400_{5}	3000_{15}	2900_{15}	2700_{20}	2550_{25}
260x65	40	5050	4600	4350	4500	4200_{5}	3900_{10}	3350_{25}	3200_{25}	3100_{30}
	75	4850	4250_{5}	3650_{15}	4350_{5}	3850_{10}	3350_{20}	3300_{25}	3050_{30}	2850_{35}
295x65	40	5550	5100	4750_{5}	5100_{10}	4750_{15}	4450_{20}	3800_{35}	3650_{40}	3500_{45}
	75	5300	4700_{10}	4150_{25}	4950_{10}	4350_{20}	3800_{35}	3750_{35}	3450_{45}	3250_{50}
330x65	40	6050	5500	5150_{10}	5500_{15}	5200_{25}	4900_{30}	4250_{45}	4050_{50}	3900_{55}
	75	5800	5100_{15}	4600_{35}	5350_{20}	4850_{30}	4250_{45}	4150_{50}	3850_{55}	3600_{65}
360x65	40	6450	5900_{5}	5500_{20}	5900_{20}	5500_{30}	5250_{35}	4650_{55}	4450_{60}	4250_{65}
	75	6150	5400_{20}	5000_{45}	5700_{25}	5150_{40}	4650_{55}	4550_{60}	4200_{70}	3950_{85}
395x65	40	6900	6300_{10}	5900_{25}	6300_{25}	5900_{35}	5600_{45}	5100_{70}	4850_{80}	4700_{90}
	75	6600	5800_{30}	5350_{55}	6100_{30}	5550_{45}	5100_{70}	5000_{75}	4600_{95}	4350_{105}
425x65	40	7250	6650_{15}	6250_{30}	6650_{30}	6250_{40}	5950_{50}	5450_{85}	5250_{100}	5050_{105}
	75	6950_{5}	6150_{35}	5650_{60}	6450_{35}	5850_{50}	5450_{85}	5350_{95}	5000_{105}	4650_{115}
165x85	40	3850	3500	3200	3300	3050	2850	2450	2350	2250
	75	3700	3100	2650	3150	2800	2450	2400	2200	2050
195x85	40	4350	4000	3750	3850	3600	3350	2900	2750	2650
	75	4150	3650	3100	3750	3300	2900	2800	2600	2450_{5}
230x85	40	4900	4500	4200	4500	4200	3950	3400_{5}	3250_{5}	3100_{10}
	75	4700	4150	3700	4350	3900	3400_{5}	3350_{5}	3100_{10}	2900_{15}
260x85	40	5400	4950	4600	4950	4650	4400	3850_{10}	3650_{15}	3500_{20}
	75	5150	4550	4150_{5}	4800	4350	3850_{10}	3750_{15}	3500_{20}	3250_{25}
295x85	40	5900	5400	5100	5400	5100	4850_{5}	4350_{20}	4150_{25}	4000_{30}
	75	5650	5000	4600_{15}	5250	4750_{10}	4350_{20}	4250_{25}	3950_{30}	3700_{35}
330x85	40	6450	5900	5500	5900	5500_{5}	5250_{15}	4850_{30}	4650_{35}	4450_{40}
	75	6150	5450	5000_{20}	5700_{5}	5150_{15}	4800_{30}	4750_{35}	4400_{40}	4150_{50}
360x85	40	6850	6300	5900_{5}	6300_{5}	5900_{10}	5600_{20}	5300_{40}	5050_{45}	4850_{50}
	75	6550	5800_{5}	5300_{25}	6100_{10}	5500_{20}	5150_{35}	5200_{45}	4800_{50}	4500_{60}
395x85	40	7350	6750	6300_{10}	6750_{10}	6300_{15}	6000_{25}	5800_{50}	5550_{55}	5350_{60}
	75	7050	6200_{10}	5700_{35}	6550_{15}	5900_{25}	5500_{45}	5700_{55}	5300_{65}	4950_{75}
425x85	40	7750	7100	6650_{10}	7100_{15}	6650_{20}	6350_{30}	6250_{60}	6000_{65}	5750_{75}
	75	7400	6550_{15}	6000_{40}	6900_{20}	6250_{30}	5800_{50}	6100_{65}	5700_{75}	5300_{95}
460x85	40	8200	7550_{5}	7050_{15}	7550_{20}	7050_{25}	6700_{35}	6650_{70}	6400_{80}	6200_{95}
	75	7850	6950_{20}	6400_{45}	7300_{25}	6600_{35}	6150_{60}	6550_{75}	6100_{95}	5750_{110}
495x85	40	8650	7950_{10}	7450_{20}	7950_{25}	7450_{30}	7100_{40}	7050_{85}	6750_{95}	6500_{105}
	75	8300	7350_{25}	6750_{50}	7700_{30}	7000_{45}	6500_{65}	6900_{90}	6450_{105}	6100_{120}

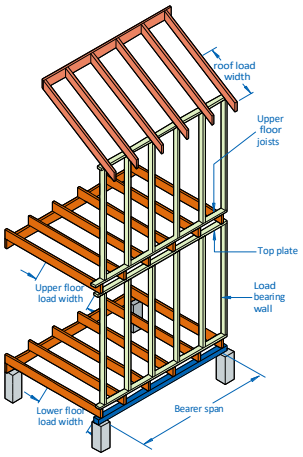
Floor bearers supporting single storey load bearing wall - sheet and tiled roof
Continuous span

Floor load width (mm)	Roof mass (kg/m^2)	1200			2400			4800		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17C) DxB (mm)		Maximum recommended continuous span bearer span (mm)								
230x115	40	5300	4850	4550	4850	4550	4300	3950	3750	3600
	75	5050	4450	4100	4700	4250	3950	3850	3600	3350_{5}
260x115	40	5800	5300	5000	5300	5000	4750	4450	4250_{5}	4100_{5}
	75	5550	4900	4500	5150	4650	4350	4350_{5}	4050_{10}	3800_{15}
295x115	40	6350	5850	5450	5850	5450	5200	5050_{10}	4850_{15}	4650_{15}
	75	6100	5350	4950	5650	5100	4750_{5}	4950_{10}	4600_{20}	4300_{25}
330x115	40	6900	6350	5950	6350	5950	5650	5600_{20}	5400_{25}	5200_{25}
	75	6600	5850	5350_{5}	6150	5550	5200_{10}	5500_{20}	5150_{25}	4800_{35}
360x115	40	7350	6750	6350	6750	6350	6000	6000_{25}	5750_{30}	5550_{30}
	75	7050	6250	5750_{10}	6550	5950_{5}	5550_{20}	5850_{25}	5500_{35}	5200_{40}
395x115	40	7850	7200	6800	7250	6800	6450_{5}	6400_{30}	6150_{35}	5950_{40}
	75	7550	6650	6150_{15}	7000	6350_{10}	5950_{25}	6300_{30}	5900_{40}	5550_{50}
425x115	40	8300	7600	7150	7650	7150_{5}	6800_{10}	6750_{35}	6500_{40}	6250_{45}
	75	7950	7050	6500_{20}	7400	6700_{10}	6250_{30}	6650_{40}	6200_{45}	5900_{55}
460x115	40	8800	8100	7600	8100_{5}	7600_{10}	7200_{15}	7150_{40}	6900_{45}	6650_{50}
	75	8450	7450_{5}	6850_{25}	7850_{5}	7100_{15}	6650_{35}	7050_{45}	6600_{55}	6250_{65}
495x115	40	9250	8500	8000_{5}	8550_{5}	8000_{15}	7600_{20}	7550_{50}	7250_{55}	7000_{60}
	75	8900	7900_{10}	7250_{30}	8300_{10}	7500_{20}	7000_{40}	7450_{50}	6950_{60}	6600_{70}
525x115	40	9650	8900	8350_{10}	8900_{10}	8350_{15}	7950_{25}	7900_{55}	7600_{60}	7350_{65}
	75	9300	8200_{10}	7600_{35}	8650_{15}	7850_{25}	7300_{45}	7750_{55}	7250_{65}	6900_{85}
560x115	40	10150	9350	8750_{15}	9350_{15}	8750_{20}	8350_{30}	8300_{60}	7950_{65}	7700_{75}
	75	9750	8600_{15}	7950_{40}	9050_{15}	8250_{30}	7700_{50}	8150_{60}	7600_{75}	7200_{95}
230x135	40	5500	5050	4700	5050	4750	4500	4250	4100	3900
	75	5250	4650	4250	4900	4450	4100	4200	3900	3650
260x135	40	6000	5500	5150	5500	5200	4900	4800	4600	4450
	75	5750	5100	4700	5350	4850	4500	4700	4400_{5}	4100_{5}
295x135	40	6600	6050	5700	6050	5700	5400	5350_{5}	5150_{5}	4950_{10}
	75	6350	5600	5150	5900	5350	4950	5250_{5}	4900_{10}	4650_{15}
330x135	40	7150	6550	6150	6600	6150	5850	5850_{10}	5600_{15}	5400_{15}
	75	6850	6050	5600	6400	5800	5400_{5}	5700_{10}	5350_{15}	5050_{25}
360x135	40	7600	7000	6600	7000	6600	6250	6200_{15}	5950_{20}	5750_{20}
	75	7300	6450	5950	6800	6150	5750_{10}	6100_{15}	5700_{25}	5400_{30}
395x135	40	8150	7500	7050	7500	7050	6700	6650_{20}	6400_{25}	6150_{30}
	75	7850	6950	6400_{5}	7300	6600	6150_{15}	6550_{20}	6100_{30}	5800_{35}
425x135	40	8600	7900	7450	7900	7450	7100_{5}	7050_{25}	6750_{30}	6500_{35}
	75	8250	7300	6750_{10}	7700	7000_{5}	6500_{20}	6900_{25}	6450_{35}	6100_{40}
460x135	40	9100	8400	7900	8400	7900	7500_{5}	7450_{30}	7150_{35}	6900_{40}
	75	8750	7750	7150_{15}	8150	7400_{10}	6900_{25}	7300_{30}	6850_{40}	6500_{50}
495x135	40	9600	8850	8300	8850	8300_{5}	7900_{10}	7850_{35}	7550_{40}	7300_{45}
	75	9250	8200	7550_{20}	8600	7800_{10}	7300_{30}	7700_{40}	7200_{45}	6850_{55}
525x135	40	10000	9250	8700	9250	8700_{10}	8250_{15}	8200_{40}	7900_{45}	7600_{50}
	75	9650	8550_{5}	7900_{25}	9000_{5}	8150_{15}	7600_{35}	8050_{40}	7550_{50}	7150_{60}
560x135	40	10500	9650	9100_{5}	9700_{5}	9100_{10}	8650_{20}	8600_{45}	8250_{50}	8000_{55}
	75	10100	8950_{10}	8250_{25}	9400_{10}	8550_{20}	8000_{40}	8450_{50}	7900_{60}	7500_{70}
590x135	40	10900	1005_{0}	9450_{5}	10050_{10}	9450_{15}	9000_{20}	8950_{50}	8600_{55}	8300_{60}
	75	10500	9300_{10}	8600_{30}	9750_{10}	8900_{25}	8300_{40}	8800_{55}	8200_{65}	7800_{75}

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), 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
3. The above table was based on a wall height of 2700.
4. 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.
5. Restraint value for slenderness calculations is 600 mm.
6. Not all sizes of SmartLam GL 17 in this table are stocked in each state. Please check with your supplier before ordering

Floor bearers supporting two floors and roof - sheet and tiled roof
Single span



Floor mass - 40 kg/m^2

EXAMPLE:
sheet roof - 40 kg/m^2
lower floor load width = 3500 mm
upper floor load width = 1500 mm
roof load width = 1950 mm
bearer span = 3100 mm (single span)

Enter single span table at 3600 mm in lower floor load width column, 1800 mm in upper floor width column, 4500 mm roof load width column, read down to a span equal to or greater than 3100 mm in the 40 kg/m^2 row.

ADOPT:

SmartLam GL 17C - 260 x 65

Lower floor load width (mm)		1800						3600					
Upper floor load width (mm)		1800			3600			1800			3600		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended single span bearer span (mm)											
130x65	40	1400	1300	1300	1300	1200	1200	1200	1100	1100	1100	1100	1100
	75	1300	1200	1200	1300	1200	1100	1200	1100	1000	1100	1100	1000
165x65	40	1800	1700	1600	1600	1600	1500	1500	1500	1400	1400	1400	1400
	75	1700	1600	1500	1600	1500	1400	1500	1400	1300	1400	1400	1300
195x65	40	2100	2000	1900	2000	1900	1800	1800	1800	1700	1700	1700	1600
	75	2100	1900	1800	1900	1800	1700	1800	1700	1600	1700	1600	1600
230x65	40	2500	2400	2300	2300	2300	2200	2200	2100	2000	2100	2000	1900
	75	2500	2300	2100	2300	2200	2000	2100	2000	1900	2000	1900	1900
260x65	40	2900	2700	2600	2700	2600	2500	2500	2400	2300	2300	2300	2200
	75	2800	2600	2400	2600	2500	2300	2400	2300	2200	2300	2200	2100
295x65	40	3300	3100	3000	3100	2900	2800	2800	2700	2700	2700	2600	2500
	75	3200	3000	2800	3000	2800	2700	2800	2600	2500	2700	2500	2400
330x65	40	3700	3500	3400	3500	3300	3200	3200	3100	3000	3000	2900	2900
	75	3600	3400	3100	3400	3200	3000	3100	3000	2800	3000	2800	2700
360x65	40	4100	3900	3700	3800	3600	3500	3500	3400	3300	3300	3200	3200
	75	4000	3700	3400	3700	3500	3300	3400	3300	3100	3300	3100	3000
395x65	40	4500	4300	4100	4200	4000	3900	3900	3700	3600	3700	3600	3500
	75	4400	4100	3800	4100	3900	3600	3800	3600	3400	3600	3500	3300_5
425x65	40	4900	4700	4500	4500	4400	4200	4200	4100	3900	4000	3900	3800_5
	75	4800	4400	4100	4400	4200	3900_5	4100	3900	3700	3900	3700_5	3600_{10}
460x65	40	5300	5000	4900	4800	4700	4500_5	4600	4400	4300	4300_5	4200_5	4100_{10}
	75	5200	4800	4500	4700	4500_5	4300_{10}	4500	4300	4100_{10}	4300_5	4100_{10}	3900_{20}
165x85	40	1900	1800	1800	1800	1700	1700	1700	1600	1600	1600	1500	1500
	75	1900	1800	1600	1800	1700	1600	1600	1600	1500	1600	1500	1400
195x85	40	2300	2200	2100	2200	2100	2000	2000	1900	1900	1900	1800	1800
	75	2300	2100	2000	2100	2000	1900	2000	1900	1800	1900	1800	1700
230x85	40	2800	2600	2500	2600	2500	2400	2400	2300	2200	2300	2200	2100
	75	2700	2500	2300	2500	2400	2200	2300	2200	2100	2200	2100	2000
260x85	40	3200	3000	2900	2900	2800	2700	2700	2600	2500	2600	2500	2400
	75	3100	2900	2700	2900	2700	2600	2700	2500	2400	2500	2400	2300
295x85	40	3600	3400	3300	3400	3200	3100	3100	3000	2900	3000	2900	2800
	75	3500	3300	3100	3300	3100	2900	3100	2900	2800	2900	2800	2700
330x85	40	4100	3900	3700	3800	3700	3500	3500	3400	3300	3300	3200	3200
	75	4000	3700	3500	3700	3500	3300	3400	3300	3100	3300	3100	3000
360x85	40	4500	4300	4100	4200	4000	3900	3800	3700	3600	3700	3600	3500
	75	4400	4100	3800	4100	3800	3600	3800	3600	3400	3600	3400	3300
395x85	40	5000	4700	4500	4600	4400	4300	4300	4100	4000	4100	3900	3800
	75	4900	4500	4200	4500	4200	4000	4200	4000	3800	4000	3800	3700
425x85	40	5300	5100	4900	4900	4700	4600	4600	4500	4300	4400	4300	4200
	75	5200	4800	4600	4800	4500	4300	4500	4300	4100	4300	4100	4000
460x85	40	5700	5500	5300	5200	5000	4900	5000	4900	4700	4800	4700	4500
	75	5600	5200	4900	5100	4900	4600	5000	4700	4500	4700	4500	4300_5
495x85	40	6100	5800	5600	5600	5400	5200	5400	5300	5100	5200	5000	4900_5
	75	6000	5600	5200	5500	5200	4900_5	5400	5100	4800	5100	4900_5	4700_{10}

Floor bearers supporting two floors and roof - sheet and tiled roof
Single span (Cont'd)

Lower floor load width (mm)		1800						3600					
Upper floor load width (mm)		1800			3600			1800			3600		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended single span bearer span (mm)											
230x115	40	3100	2900	2800	2900	2800	2700	2600	2600	2500	2500	2400	2400
	75	3000	2800	2600	2800	2600	2500	2600	2500	2400	2500	2400	2300
260x115	40	3500	3400	3200	3300	3100	3000	3000	2900	2800	2900	2800	2700
	75	3400	3200	3000	3200	3000	2800	3000	2800	2700	2800	2700	2600
295x115	40	4000	3800	3700	3800	3600	3500	3500	3300	3200	3300	3200	3100
	75	3900	3600	3400	3700	3400	3300	3400	3200	3100	3300	3100	3000
330x115	40	4600	4300	4200	4200	4100	3900	3900	3800	3700	3700	3600	3500
	75	4500	4100	3900	4200	3900	3700	3800	3600	3500	3700	3500	3300
360x115	40	5000	4800	4600	4600	4400	4300	4300	4200	4000	4100	4000	3900
	75	4900	4500	4200	4500	4300	4000	4200	4000	3800	4000	3800	3700
395x115	40	5400	5200	5000	5000	4800	4700	4700	4600	4500	4500	4400	4300
	75	5300	5000	4700	4900	4600	4400	4700	4400	4200	4500	4300	4100
425x115	40	5800	5600	5400	5300	5100	5000	5100	5000	4800	4900	4800	4600
	75	5700	5300	5000	5200	4900	4700	5100	4800	4600	4800	4600	4400
460x115	40	6300	6000	5800	5700	5500	5300	5600	5400	5300	5300	5200	5000
	75	6100	5700	5400	5600	5300	5100	5500	5200	5000	5200	5000	4800
495x115	40	6700	6400	6200	6100	5900	5700	6100	5900	5700	5700	5500	5400
	75	6600	6100	5700	6000	5700	5400	6000	5700	5400	5600	5400	5100
525x115	40	7100	6800	6500	6400	6200	6000	6400	6200	6000	6000	5800	5700
	75	6900	6400	6100	6300	6000	5700	6300	6000	5700	5900	5600	5400
230x135	40	3300	3100	3000	3000	2900	2800	2800	2700	2600	2700	2600	2500
	75	3200	2900	2800	3000	2800	2600	2800	2600	2500	2600	2500	2400
260x135	40	3700	3500	3400	3500	3300	3200	3200	3100	3000	3000	3000	2900
	75	3600	3400	3100	3400	3200	3000	3100	3000	2800	3000	2900	2700
295x135	40	4300	4100	3900	4000	3800	3700	3700	3500	3400	3500	3400	3300
	75	4200	3900	3600	3900	3600	3400	3600	3400	3300	3400	3300	3100
330x135	40	4800	4600	4400	4400	4300	4200	4100	4000	3900	3900	3800	3700
	75	4700	4400	4100	4400	4100	3900	4100	3900	3700	3900	3700	3500
360x135	40	5200	5000	4800	4800	4600	4500	4500	4400	4300	4300	4200	4100
	75	5100	4800	4500	4700	4500	4300	4500	4200	4000	4300	4100	3900
395x135	40	5700	5500	5300	5200	5000	4900	5000	4900	4700	4800	4700	4500
	75	5600	5200	4900	5100	4900	4600	5000	4700	4500	4700	4500	4300
425x135	40	6100	5800	5600	5600	5400	5200	5400	5300	5100	5200	5000	4900
	75	6000	5600	5200	5500	5200	4900	5400	5100	4800	5100	4900	4700
460x135	40	6600	6300	6000	6000	5800	5600	5900	5800	5600	5600	5400	5300
	75	6400	6000	5600	5900	5600	5300	5900	5500	5300	5500	5300	5100
495x135	40	7000	6700	6500	6400	6200	6000	6400	6200	6000	5900	5800	5700
	75	6900	6400	6000	6300	5900	5700	6300	5900	5700	5900	5600	5400
525x135	40	7500	7100	6800	6800	6500	6300	6800	6500	6300	6300	6100	6000
	75	7300	6800	6400	6700	6300	6000	6700	6300	6000	6200	5900	5700
560x135	40	7900	7600	7300	7200	6900	6700	7200	6900	6700	6700	6500	6300
	75	7800	7200	6800	7100	6700	6400	7100	6700	6400	6600	6300	6000
590x135	40	8400	8000	7700	7600	7300	7100	7600	7300	7100	7000	6800	6700
	75	8200	7600	7100	7500	7000	6700	7500	7000	6700	6900	6600	6300

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on total upper floor mass of 40 kg/m^2 , total ground floor mass of 40 kg/m^2, floor live load of 1.5 kPa, floor point load of 1.8 kN, wall mass of 32 kg/m^2, & permanent floor live load of 0.5 kPa.
3. The above table was based on a wall height of 5400 mm
4. End bearing lengths = 70 mm at end supports and 90 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 70 mm at end supports and 90 mm at internal supports.
5. Not all sizes of SmartLam GL 17 in this table are stocked in each state. Please check with your supplier before ordering

Floor bearers supporting two floors and roof - sheet and tiled roof
Continuous span

Lower floor load width (mm)		1800						3600					
Upper floor load width (mm)		1800			3600			1800			3600		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended continuous span bearer span (mm)											
130x65	40	1800	1700	1600	1500	1400	1400	1500	1400	1400	1300	1300	1200
	75	1700	1500	1400	1500	1400	1300	1500	1400	1300	1300	1200	1100
165x65	40	2300	2100	2000	1900	1800	1800	1900	1800	1800	1700	1600	1600
	75	2200	2000	1800	1900	1700	1600	1900	1700	1600	1700	1600	1500
195x65	40	2700	2500	2400	2300	2200	2100	2300	2200	2100	2000	2000	1900
	75	2600	2300	2100	2300	2100	1900	2200	2100	1900	2000	1900	1700
230x65	40	3200	3000	2800	2700	2600	2500	2700	2600	2500	2400	2300	2200_{5}
	75	3100	2800	2500	2700	2400	2300_{5}	2600	2400	2300_{5}	2400	2200_{5}	2100_{15}
260x65	40	3600	3400	3200	3100	2900_{5}	2800_{5}	3000	2900_{5}	2800_{5}	2700_{10}	2600_{15}	2500_{20}
	75	3500	3100	2800_{5}	3000	2800_{10}	2600_{20}	3000	2800_{10}	2600_{20}	2700_{10}	2500_{20}	2300_{30}
295x65	40	4200	3900_{5}	3600_{10}	3500_{10}	3300_{15}	3200_{20}	3400_{10}	3300_{15}	3200_{20}	3100_{25}	3000_{30}	2900_{35}
	75	4000	3500_{10}	3200_{20}	3400_{15}	3100_{25}	2900_{35}	3400_{15}	3100_{25}	2900_{35}	3100_{30}	2800_{35}	2700_{55}
330x65	40	4700_{10}	4400_{15}	4100_{20}	4000_{25}	3700_{30}	3600_{40}	3800_{25}	3700_{30}	3600_{40}	3500_{40}	3300_{50}	3200_{65}
	75	4600_{15}	4000_{25}	3600_{35}	3900_{30}	3500_{40}	3200_{65}	3800_{30}	3500_{40}	3200_{65}	3400_{45}	3200_{65}	3000_{75}
360x65	40	5000_{15}	4800_{30}	4500_{35}	4400_{40}	4100_{50}	3900_{65}	4200_{35}	4000_{45}	3900_{60}	3800_{65}	3600_{70}	3500_{75}
	75	4900_{20}	4400_{40}	4000_{60}	4300_{45}	3900_{65}	3500_{75}	4100_{40}	3800_{65}	3500_{75}	3700_{65}	3500_{80}	3300_{90}
395x65	40	5400_{25}	5200_{40}	5000_{60}	4800_{65}	4600_{75}	4300_{80}	4600_{65}	4400_{70}	4200_{75}	4200_{80}	4000_{85}	3800_{95}
	75	5300_{30}	4900_{65}	4400_{80}	4700_{65}	4300_{80}	3900_{95}	4500_{65}	4200_{80}	3900_{90}	4100_{85}	3800_{95}	3600_{110}
425x65	40	5700_{30}	5500_{55}	5300_{70}	5200_{80}	5000_{90}	4700_{95}	5000_{75}	4800_{80}	4600_{90}	4500_{95}	4300_{100}	4100_{105}
	75	5600_{40}	5200_{75}	4800_{90}	5100_{80}	4600_{95}	4300_{110}	4900_{80}	4500_{90}	4200_{105}	4400_{95}	4100_{110}	3800_{120}
460x65	40	6000_{40}	5800_{70}	5600_{80}	5600_{90}	5400_{100}	5100_{110}	5400_{90}	5200_{95}	4900_{105}	4800_{105}	4600_{115}	4500_{125}
	75	5900_{50}	5600_{85}	5200_{110}	5500_{95}	5100_{115}	4700_{130}	5300_{90}	4900_{105}	4500_{120}	4800_{110}	4400_{125}	4200_{140}
165x85	40	2600	2400	2300	2200	2100	2000	2200	2100	2000	2000	1900	1800
	75	2500	2300	2000	2200	2000	1800	2200	2000	1800	1900	1800	1700
195x85	40	3100	2900	2700	2600	2500	2400	2600	2500	2400	2300	2200	2200
	75	3000	2700	2400	2600	2400	2200	2500	2400	2200	2300	2100	2000
230x85	40	3700	3400	3200	3100	3000	2800	3100	3000	2800	2800	2700	2600
	75	3500	3200	2900	3000	2800	2600	3000	2800	2600	2700	2500	2400
260x85	40	4200	3900	3600	3500	3400	3200	3500	3300	3200	3100	3000	2900_{5}
	75	4100	3600	3200	3400	3200	2900_{5}	3400	3200	2900_{5}	3100	2900_{5}	2700_{10}
295x85	40	4600	4400	4200	4100	3800_{5}	3600_{5}	3900	3800_{5}	3600_{5}	3600_{10}	3400_{15}	3300_{20}
	75	4500	4100	3700_{5}	4000	3600_{10}	3300_{15}	3900	3600_{10}	3300_{15}	3500_{10}	3200_{20}	3000_{30}
330x85	40	5000	4800	4700_{10}	4600_{10}	4300_{15}	4100_{20}	4400_{10}	4200_{15}	4100_{20}	4000_{25}	3800_{25}	3700_{35}
	75	4900	4600_{10}	4200_{20}	4500_{15}	4100_{25}	3700_{30}	4300_{10}	4000_{20}	3700_{30}	3900_{25}	3600_{35}	3400_{45}
360x85	40	5300	5200_{5}	5000_{15}	5000_{20}	4800_{30}	4500_{35}	4800_{20}	4600_{25}	4400_{30}	4300_{35}	4200_{40}	4000_{50}
	75	5300	5000_{20}	4600_{35}	4900_{25}	4500_{35}	4100_{55}	4700_{20}	4400_{35}	4000_{45}	4300_{35}	4000_{55}	3700_{65}
395x85	40	5700	5500_{15}	5400_{25}	5300_{30}	5200_{40}	5000_{60}	5300_{35}	5100_{40}	4900_{50}	4800_{55}	4600_{65}	4400_{70}
	75	5600_{5}	5300_{30}	5100_{55}	5200_{30}	5000_{65}	4600_{75}	5200_{35}	4800_{50}	4400_{70}	4700_{60}	4300_{70}	4100_{85}
425x85	40	6100_{10}	5800_{20}	5700_{30}	5600_{35}	5500_{55}	5300_{70}	5600_{40}	5500_{60}	5200_{65}	5100_{70}	4900_{75}	4700_{80}
	75	6000_{15}	5600_{35}	5300_{65}	5500_{40}	5300_{75}	4900_{90}	5500_{50}	5100_{70}	4800_{80}	5000_{75}	4700_{85}	4400_{95}
460x85	40	6400_{15}	6200_{25}	6000_{40}	6000_{55}	5800_{70}	5700_{80}	5900_{60}	5800_{70}	5600_{80}	5500_{85}	5300_{90}	5100_{95}
	75	6300_{20}	6000_{45}	5700_{75}	5900_{65}	5600_{85}	5400_{105}	5900_{65}	5600_{80}	5200_{95}	5400_{85}	5100_{100}	4700_{110}
495x85	40	6800_{20}	6600_{35}	6300_{55}	6300_{65}	6100_{80}	6000_{90}	6300_{70}	6100_{80}	6000_{90}	5900_{100}	5700_{105}	5500_{110}
	75	6700_{25}	6300_{65}	6000_{85}	6200_{70}	5900_{95}	5700_{115}	6200_{75}	5900_{95}	5600_{110}	5800_{100}	5400_{115}	5100_{125}

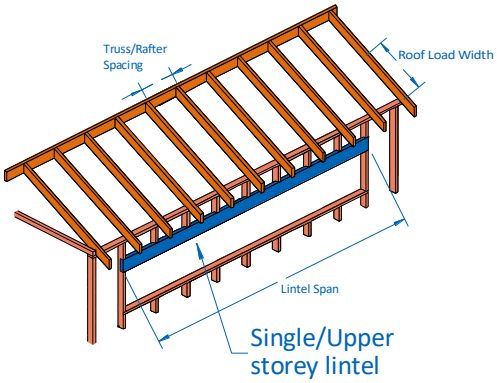
Floor bearers supporting two floors and roof - sheet and tiled roof
Continuous span (Cont'd)

Lower floor load width (mm)		1800						3600					
Upper floor load width (mm)		1800			3600			1800			3600		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended continuous span bearer span (mm)											
230x115	40	4100	4000	3800	3600	3400	3300	3600	3400	3300	3200	3100	3000
	75	4000	3700	3300	3500	3200	3000	3500	3200	3000	3200	2900	2800
260x115	40	4500	4400	4200	4200	3900	3700	4000	3900	3700	3600	3500	3400
	75	4400	4200	3800	4100	3700	3400	4000	3700	3400	3600	3300	3100
295x115	40	5000	4800	4600	4600	4500	4300	4600	4400	4200	4100	4000	3800
	75	4900	4600	4400	4500	4200	3900	4500	4200	3900	4100	3800_{5}	3500_{10}
330x115	40	5400	5200	5000	5000	4900	4700_{5}	5000	4900	4700_{5}	4600_{5}	4400_{10}	4300_{15}
	75	5300	5000	4800	4900	4700_{5}	4400_{15}	4900	4600_{5}	4300_{10}	4500_{5}	4200_{15}	4000_{25}
360x115	40	5800	5600	5400	5300	5200_{5}	5100_{10}	5300	5200_{5}	5100_{10}	5000_{15}	4800_{20}	4600_{25}
	75	5700	5300	5100_{10}	5300	5000_{15}	4800_{30}	5300	5000_{15}	4700_{20}	4900_{15}	4600_{25}	4300_{35}
395x115	40	6200	6000	5800	5700_{5}	5600_{10}	5400_{20}	5700_{5}	5600_{10}	5400_{20}	5400_{25}	5300_{30}	5100_{35}
	75	6100	5700	5400_{15}	5600_{5}	5400_{20}	5200_{35}	5700_{10}	5400_{25}	5200_{35}	5300_{25}	5000_{40}	4700_{55}
425x115	40	6500	6300	6100_{5}	6000_{10}	5900_{20}	5700_{25}	6000_{10}	5900_{20}	5700_{25}	5700_{30}	5600_{40}	5500_{55}
	75	6400	6000_{10}	5800_{25}	6000_{15}	5700_{30}	5500_{50}	6000_{15}	5700_{30}	5500_{50}	5600_{35}	5400_{60}	5100_{70}
460x115	40	6900	6700	6500_{10}	6400_{15}	6200_{25}	6100_{35}	6400_{20}	6200_{25}	6100_{35}	6000_{40}	5900_{60}	5800_{70}
	75	6800	6400_{15}	6100_{30}	6300_{20}	6000_{40}	5800_{65}	6300_{20}	6000_{40}	5800_{65}	6000_{45}	5800_{70}	5500_{85}
495x115	40	7300	7100_{10}	6800_{20}	6800_{25}	6600_{35}	6400_{45}	6800_{25}	6600_{35}	6400_{45}	6400_{55}	6300_{70}	6100_{80}
	75	7200	6800_{20}	6500_{40}	6700_{25}	6400_{55}	6100_{75}	6700_{30}	6400_{55}	6100_{75}	6300_{60}	6100_{80}	5900_{95}
525x115	40	7600	7400_{15}	7100_{25}	7100_{30}	6900_{40}	6700_{60}	7100_{35}	6900_{40}	6700_{60}	6700_{65}	6500_{75}	6400_{85}
	75	7500_{5}	7100_{25}	6700_{55}	7000_{35}	6700_{65}	6400_{80}	7000_{35}	6700_{65}	6400_{80}	6600_{70}	6400_{90}	6200_{105}
230x135	40	4300	4100	4000	4000	3800	3600	3900	3700	3600	3500	3300	3200
	75	4200	4000	3600	3900	3500	3300	3800	3500	3300	3400	3200	3000
260x135	40	4700	4500	4400	4300	4200	4100	4300	4200	4000	3900	3800	3600
	75	4600	4300	4100	4300	4000	3700	4300	4000	3700	3900	3600	3400
295x135	40	5200	5000	4800	4800	4700	4500	4800	4700	4500	4500	4300	4100
	75	5100	4800	4600	4700	4500	4300	4700	4500	4200	4400	4100	3800
330x135	40	5600	5400	5200	5200	5100	4900	5200	5100	4900	4900	4800	4600_{5}
	75	5500	5200	5000	5100	4900	4700_{5}	5100	4900	4700_{5}	4900	4600_{5}	4300_{15}
360x135	40	6000	5800	5600	5600	5400	5300	5500	5400	5300	5200_{5}	5100_{10}	5000_{15}
	75	5900	5500	5300	5500	5200	5000_{15}	5500	5200	5000_{15}	5200_{5}	5000_{15}	4700_{25}
395x135	40	6400	6200	6000	6000	5800	5700_{5}	5900	5800	5700_{5}	5600_{10}	5500_{15}	5400_{25}
	75	6300	5900	5700_{5}	5900	5600_{10}	5400_{20}	5900	5600_{10}	5400_{20}	5600_{15}	5400_{25}	5100_{35}
425x135	40	6800	6500	6300	6300	6100_{5}	6000_{10}	6300	6100_{5}	6000_{10}	5900_{15}	5800_{25}	5700_{30}
	75	6700	6300	6000_{10}	6200	5900_{15}	5700_{30}	6200	5900_{15}	5700_{30}	5900_{20}	5700_{35}	5500_{50}
460x135	40	7200	6900	6700	6700_{5}	6500_{10}	6300_{20}	6700_{5}	6500_{10}	6300_{20}	6300_{25}	6200_{30}	6000_{40}
	75	7100	6700	6400_{15}	6600_{5}	6300_{20}	6100_{35}	6600_{10}	6300_{20}	6100_{35}	6200_{25}	6000_{45}	5800_{65}
495x135	40	7600	7300	7100_{5}	7000_{10}	6900_{20}	6700_{25}	7000_{10}	6900_{20}	6700_{25}	6600_{30}	6500_{40}	6400_{55}
	75	7500	7000_{10}	6700_{25}	6900_{10}	6600_{30}	6400_{50}	7000_{15}	6600_{30}	6400_{50}	6600_{35}	6300_{60}	6100_{75}
525x135	40	7900	7700	7400_{10}	7400_{15}	7200_{25}	7000_{30}	7300_{15}	7200_{25}	7000_{30}	6900_{35}	6800_{50}	6700_{65}
	75	7800	7400_{15}	7000_{30}	7300_{20}	6900_{35}	6700_{65}	7300_{20}	6900_{35}	6700_{65}	6900_{45}	6600_{70}	6400_{85}
560x135	40	8300	8000_{5}	7800_{15}	7700_{20}	7500_{30}	7300_{40}	7700_{20}	7500_{30}	7300_{40}	7300_{50}	7100_{65}	7000_{75}
	75	8200	7700_{20}	7400_{35}	7600_{25}	7300_{45}	7000_{70}	7600_{25}	7300_{45}	7000_{70}	7200_{55}	7000_{75}	6700_{95}
590x135	40	8600	8400_{10}	8100_{20}	8000_{25}	7800_{35}	7600_{50}	8000_{25}	7800_{35}	7600_{50}	7600_{60}	7400_{70}	7300_{80}
	75	8500_{5}	8000_{25}	7700_{45}	7900_{30}	7600_{55}	7300_{75}	7900_{30}	7600_{55}	7300_{75}	7500_{65}	7200_{85}	7000_{100}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on total upper floor mass of 40 kg/m^2 , total ground floor mass of 40 kg/m^2, floor live load of 1.5 kPa, floor point load of 1.8 kN, wall mass of 32 kg/m^2, & permanent floor live load of 0.5 kPa.
3. The above table was based on a wall height of 5400 mm
4. End bearing lengths = 70 mm at end supports and 90 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 70 mm at end supports and 90 mm at internal supports.
5. Not all sizes of SmartLam GL 17 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, N3 & N4



EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
roof load width = 3900 mm
rafter/truss spacing = 600 mm
lintel span = 3500 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

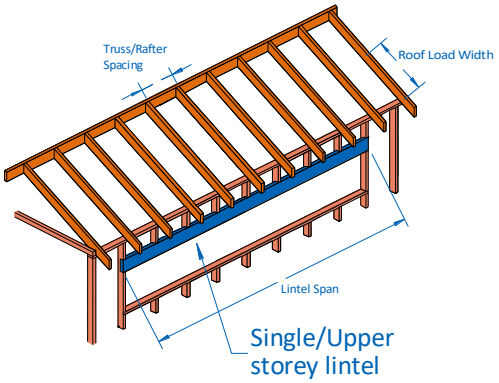
ADOPT:
SmartLam GL 17C - 260 x 65

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/tuss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Lintel span (mm)									
		Single span - Wind speed N1, N2, N3 & N4									
130x65	40	3400	3350	2850	2850	2500	2450	2150	2050	1900	1650
	90	2750	2750	2150	2150	1900	1900	1700	1550	1550	1250
165x65	40	4150	4150	3450	3400	3100	3050	2750	2700	2500	2350
	90	3350	3300	2750	2800	2400	2450	2200	2150	2050	2000
195x65	40	4800	4800	3950	3950	3550	3500	3250	3150	2900	2800
	90	3850	3800	3200	3150	2850	2850	2650	2700	2400	2450_{5}
230x65	40	5550	5550	4600	4550	4100	4050	3750	3700	3500	3300
	90	4450	4400	3650	3600	3250	3250	3000	3000	2850	2850_{5}
260x65	40	6200	6200	5100	5100	4550	4500	4200	4200	3900	3750
	90	4950	4950	4050	4050	3600	3600	3350	3300	3150	3100_{5}
295x65	40	7000	7000	5750	5700	5100	5100	4700	4650	4400	4400_{5}
	90	5550	5500	4550	4500	4050	4000	3700	3700	3500_{10}	3450_{5}
330x65	40	7850	7850	6350	6350	5650	5600	5200	5200_{5}	4850_{10}	4850_{15}
	90	6150	6150	5000	5000	4450	4450	4100_{5}	4100_{10}	3850_{10}	3800_{10}
360x65	40	8550	8550	6950	6900	6150	6100	5600_{5}	5600_{5}	5250_{10}	5250_{15}
	90	6700	6700	5400	5400	4800	4800_{5}	4400_{5}	4400_{10}	4150_{15}	4150_{20}
395x65	40	9450	9400	7600	7600	6700	6700_{5}	6150_{10}	6100_{5}	5750_{10}	5700_{15}
	90	7350	7300	5950	5900	5250	5250_{5}	4800_{10}	4750_{5}	4500_{15}	4500_{20}
425x65	40	10200	10200	8200	8200	7200_{5}	7200_{5}	6600_{10}	6600_{10}	6150_{20}	6100_{15}
	90	7900	7900	6350	6350	5600_{5}	5600_{5}	5150_{10}	5100_{15}	4800_{20}	4750_{15}
460x65	40	11150	11100	8900	8900	7800_{5}	7800_{5}	7150_{10}	7100_{15}	6650_{20}	6650_{15}
	90	8600	8550	6850	6850	6050_{10}	6000_{5}	5500_{15}	5500_{20}	5150_{20}	5150_{30}
495x65	40	11950	11900	9650	9650	8450_{10}	8400_{10}	7650_{15}	7650_{20}	7150_{20}	7100_{25}
	90	9300	9300	7400	7350	6500_{10}	6450_{5}	5950_{15}	5900_{20}	5500_{25}	5500_{30}
130x85	40	3650	3600	3050	3000	2750	2750	2500	2400	2200	2100
	90	2950	2950	2400	2450	2100	2050	1850	1850	1700	1600
165x85	40	4450	4450	3700	3650	3300	3300	3050	3050	2800	2750
	90	3600	3550	2950	2950	2650	2700	2400	2450	2250	2200
195x85	40	5150	5150	4250	4250	3850	3800	3550	3500	3350	3200
	90	4150	4100	3400	3400	3050	3050	2850	2850	2650	2700
230x85	40	6000	5950	4950	4950	4400	4400	4050	4050	3800	3800
	90	4750	4750	3950	3900	3500	3450	3250	3200	3050	3050
260x85	40	6700	6700	5500	5500	4900	4900	4500	4500	4250	4250
	90	5300	5350	4350	4350	3900	3850	3600	3550	3400	3350
295x85	40	7600	7600	6200	6200	5500	5500	5050	5050	4750	4700
	90	6000	5950	4900	4850	4350	4350	4000	4000	3750	3750
330x85	40	8500	8450	6900	6900	6100	6100	5600	5600	5250	5250_{5}
	90	6650	6650	5400	5400	4800	4800	4400	4400	4150_{5}	4150_{10}
360x85	40	9250	9250	7550	7500	6650	6650	6100	6050	5700	5650_{5}
	90	7250	7250	5900	5850	5200	5200	4800	4750	4500	4450_{5}
395x85	40	10200	10200	8300	8250	7300	7250	6650	6650_{5}	6200_{5}	6200_{5}
	90	7950	7950	6400	6400	5650	5650	5200	5200_{5}	4900_{10}	4850_{15}
425x85	40	11100	11050	8950	8900	7850	7850	7200_{5}	7150	6700_{10}	6700_{15}
	90	8600	8600	6900	6900	6100	6050	5550_{5}	5550_{10}	5200_{10}	5200_{15}
460x85	40	12000	12000	9750	9700	8550	8500	7750_{5}	7750_{10}	7250_{15}	7200_{15}
	90	9350	9350	7500	7450	6550	6550	6000_{10}	5950_{5}	5600_{15}	5600_{20}
495x85	40	12000	12000	10550	10500	9200	9200_{5}	8400_{10}	8350_{10}	7800_{15}	7800_{15}
	90	10150	10150	8050	8050	7050	7050_{5}	6450_{10}	6450_{5}	6000_{20}	6000_{15}

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
roof load width = 3900 mm
rafter/truss spacing = 600 mm
lintel span = 3500 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:

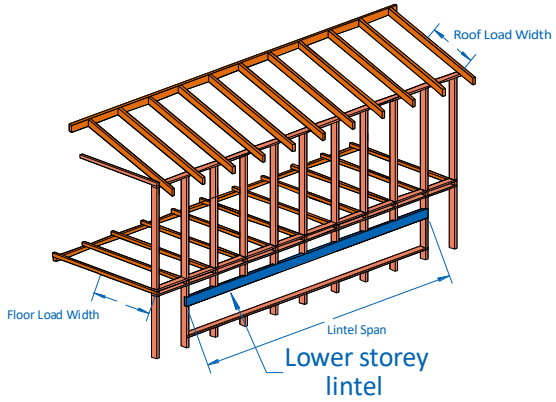
SmartLam GL 17C - 295 x 65 (requires additional 5 mm bearing length)

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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Lintel span (mm)									
		Single Span - Wind speed C1, C2 & C3									
130x65	40	2850	2800	2000	1750	1600	1200	1400	NS	1250	NS
	90	2750	2750	2000	1850	1600	1200	1400	NS	1250	NS
165x65	40	3700	3500	2600	2500	2050	1900	1750	1450	1550	NS
	90	3350	3300	2600	2550	2100	1950	1800	1500_{5}	1600	1000
195x65	40	4350	4300	3050	2950	2500	2400	2150	2000	1850	1550_{10}
	90	3850	3800	3100	2950	2550	2450_{5}	2200_{5}	2050_{5}	1900	1600_{15}
230x65	40	5150	5100	3650	3450	2900	2850	2550_{5}	2450_{10}	2250_{5}	2200_{10}
	90	4450	4400	3650	3500	2950	2850_{5}	2600_{10}	2500_{15}	2300_{10}	2200_{15}
260x65	40	5850	5750	4100	3950	3350	3200	2850_{5}	2800_{15}	2600_{10}	2500_{20}
	90	4950	4950	4050	4050_{5}	3400_{10}	3250_{5}	2900_{10}	2800_{25}	2600_{20}	2550_{30}
295x65	40	6650	6600	4700	4650	3800_{5}	3650	3250_{5}	3100_{10}	2900_{15}	2800_{20}
	90	5550	5500	4550	4500	3850_{10}	3700_{10}	3350_{10}	3150_{20}	2950_{25}	2850_{40}
330x65	40	7450	7400	5200	5200_{5}	4250_{10}	4150_{15}	3700_{15}	3500_{10}	3250_{15}	3100_{25}
	90	6150	6150	5000_{5}	5000_{10}	4300_{15}	4200_{20}	3750_{25}	3550_{20}	3350_{20}	3150_{35}
360x65	40	8150	8050	5700	5600_{5}	4650_{5}	4650_{10}	4000_{15}	3850_{15}	3600_{30}	3400_{20}
	90	6700	6700	5400_{10}	5400_{10}	4700_{10}	4700_{15}	4050_{25}	3950_{25}	3650_{40}	3450_{30}
395x65	40	8900	8850	6250_{5}	6200_{5}	5100_{15}	5050_{20}	4400_{20}	4350_{30}	3950_{30}	3800_{25}
	90	7350	7300	5950_{5}	5900_{10}	5150_{25}	5100_{30}	4450_{30}	4400_{40}	4000_{40}	3850_{35}
425x65	40	9650	9600	6750_{10}	6700_{15}	5500_{20}	5400_{20}	4750_{20}	4750_{25}	4250_{40}	4150_{25}
	90	7900	7900	6350_{15}	6350_{10}	5550_{30}	5500_{35}	4850_{40}	4850_{50}	4300_{50}	4200_{35}
460x65	40	10400	10350	7300_{15}	7300_{15}	5950_{15}	5850_{25}	5150_{30}	5100_{40}	4600_{35}	4550_{45}
	90	8600	8550	6850_{15}	6850_{20}	6050_{35}	5900_{30}	5200_{40}	5150_{50}	4650_{45}	4600_{55}
495x65	40	11200	11150	7850_{15}	7800_{15}	6400_{25}	6350_{20}	5550_{40}	5450_{40}	4950_{50}	4950_{55}
	90	9300	9300_{5}	7400_{20}	7350_{25}	6450_{35}	6400_{30}	5600_{50}	5550_{60}	5000_{60}	5000_{70}
130x85	40	3300	3150	2350	2200	1850	1550	1550	1150	1400	NS
	90	2950	2950	2350	2250	1850	1600	1600	1200	1450	NS
165x85	40	4200	4100	2950	2850	2400	2300	2050	1850	1800	1500
	90	3600	3550	2950	2900	2450	2350	2100	1950	1850	1550
195x85	40	5000	4950	3550	3350	2850	2750	2500	2350	2200	2100
	90	4150	4100	3400	3400	2900	2800	2500	2400_{5}	2250	2150_{5}
230x85	40	5950	5800	4150	4050	3400	3200	2900	2800_{5}	2600	2500_{10}
	90	4750	4750	3950	3900	3450	3250	2950	2850_{10}	2650_{5}	2550_{15}
260x85	40	6700	6650	4700	4650	3850	3650	3300	3150	2900_{5}	2850_{10}
	90	5300	5350	4350	4350	3900	3700	3350	3200_{5}	2950_{10}	2900_{20}
295x85	40	7600	7600	5350	5300	4350	4250	3750_{5}	3600_{5}	3350	3200_{10}
	90	6000	5950	4900	4850	4350	4350_{5}	3800_{10}	3650_{10}	3400_{10}	3250_{15}
330x85	40	8500	8450	6000	5900	4900_{5}	4850_{10}	4200_{10}	4100_{15}	3750_{15}	3600_{10}
	90	6650	6650	5400	5400	4800_{10}	4800_{15}	4250_{15}	4150_{25}	3800_{20}	3650_{20}
360x85	40	9250	9250	6550	6450	5300_{5}	5250_{10}	4600_{5}	4550_{10}	4100_{15}	4000_{15}
	90	7250	7250	5900	5850	5200_{10}	5200_{15}	4650_{10}	4650_{20}	4150_{30}	4050_{20}
395x85	40	10200	10200	7200_{5}	7200_{5}	5850_{5}	5750_{10}	5050_{15}	5050_{20}	4500_{20}	4450_{25}
	90	7950	7950	6400	6400	5650_{10}	5650_{20}	5100_{25}	5100_{30}	4600_{25}	4550_{35}
425x85	40	11050	11000	7750_{5}	7700_{5}	6300_{10}	6200_{10}	5450_{20}	5350_{20}	4900_{30}	4850_{35}
	90	8600	8600	6900_{5}	6900_{10}	6100_{20}	6050_{15}	5500_{30}	5450_{40}	4950_{40}	4900_{45}
460x85	40	11950	11950	8400_{10}	8300_{5}	6800_{15}	6800_{20}	5900_{20}	5800_{25}	5250_{30}	5200_{35}
	90	9350	9350	7500_{10}	7450_{10}	6550_{20}	6550_{20}	6000_{35}	5850_{35}	5300_{40}	5250_{45}
495x85	40	12000	12000	9000_{10}	9000_{5}	7350_{20}	7350_{25}	6350_{25}	6250_{20}	5650_{35}	5600_{45}
	90	10150	10150	8050_{10}	8050_{15}	7050_{25}	7050_{30}	6400_{35}	6350_{30}	5750_{45}	5650_{55}

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



EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
roof load width = 3900 mm
floor load width = 1200 mm
rafter/truss spacing = 600 mm
lintel span = 3500 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

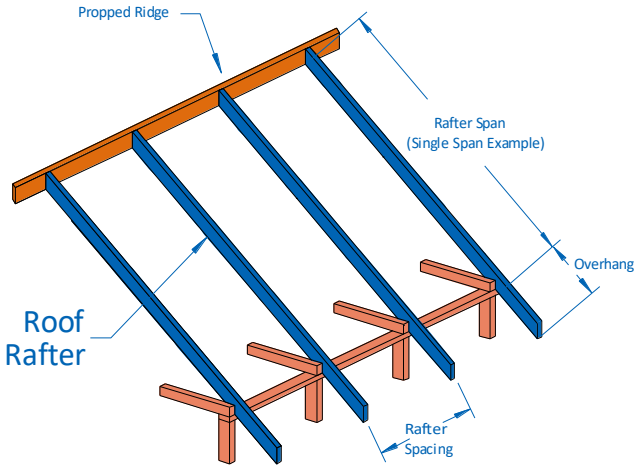
ADOPT: SmartLam GL 17C - 260 x 65

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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended single span lintel span (mm)											
130x65	40	2100	1850	1700	1950	1800	1650	1850	1700	1600	1800	1650	1550
	90	1950	1750	1650	1750	1650	1550	1600	1500	1450	1500	1450	1350
165x65	40	2700	2400	2200	2500	2300	2100	2400	2200	2050	2300	2100	2000
	90	2500	2250	2100	2250	2100	1950	2050	1950	1850	1950	1850	1750
195x65	40	3050	2800	2600	2950	2700	2500	2800	2600	2450	2700	2550	2350
	90	2900	2700	2500	2650	2500	2350	2450	2350	2200	2300	2200	2100
230x65	40	3550	3200	3000	3350	3100	2900	3200	3000	2850	3100	2950	2800
	90	3300	3100	2900	3050	2900	2750	2850	2750	2600	2750	2600	2500
260x65	40	3900	3550	3350	3700	3450	3250	3550	3350	3150	3450	3250	3100
	90	3700	3400	3200	3400	3200	3050	3200	3050	2900	3000	2900	2800
295x65	40	4350	4000	3700	4150	3850	3600	4000	3700	3500	3850	3600	3400
	90	4100	3800	3550	3750	3550	3400	3550	3350	3250_{5}	3350	3200	3100_{5}
330x65	40	4800	4400	4050	4600	4200	3950_{5}	4400	4100	3850_{5}	4200	3950	3750_{5}
	90	4550	4200	3950_{5}	4150	3900	3700_{5}	3900	3700	3550_{10}	3700	3550_{5}	3400_{10}
360x65	40	5200	4750	4400_{5}	4950	4550	4250_{5}	4750	4400	4150_{5}	4550	4300	4050_{10}
	90	4900	4500	4250_{5}	4500	4200	4000_{10}	4200	4000_{5}	3850_{10}	3950_{5}	3800_{10}	3700_{15}
395x65	40	5700	5150	4750_{10}	5400	4950	4650_{10}	5150	4800	4500_{10}	4950	4650_{5}	4400_{10}
	90	5300	4900	4600_{10}	4850	4600_{5}	4350_{10}	4550_{5}	4350_{10}	4150_{15}	4300_{10}	4150_{10}	4000_{15}
425x65	40	6100	5500	5100_{10}	5750	5300_{5}	4950_{15}	5500	5100_{5}	4800_{15}	5300	4950_{5}	4700_{15}
	90	5700	5250_{5}	4900_{15}	5200	4900_{5}	4650_{15}	4850_{5}	4600_{10}	4400_{20}	4600_{10}	4400_{15}	4250_{20}
460x65	40	6600	5950_{5}	5500_{15}	6200	5700_{5}	5300_{15}	5950	5500_{5}	5150_{15}	5700	5350_{10}	5050_{20}
	90	6150	5650_{5}	5300_{15}	5600	5250_{10}	5000_{20}	5200_{10}	4950_{15}	4750_{20}	4950_{15}	4750_{20}	4550_{25}
165x85	40	2900	2650	2400	2750	2500	2300	2650	2400	2250	2500	2350	2200
	90	2700	2500	2300	2450	2300	2150	2250	2150	2050	2150	2050	1950
195x85	40	3300	3050	2800	3150	2900	2750	3000	2850	2700	2900	2750	2600
	90	3100	2900	2750	2850	2700	2550	2700	2550	2400	2550	2400	2300
230x85	40	3800	3450	3250	3600	3350	3150	3450	3250	3050	3350	3150	3000
	90	3600	3300	3100	3300	3100	2950	3100	2950	2850	2950	2850	2750
260x85	40	4200	3850	3600	4000	3700	3500	3850	3600	3400	3700	3500	3300
	90	3950	3700	3450	3650	3450	3300	3400	3250	3150	3250	3150	3000
295x85	40	4700	4300	4000	4500	4150	3900	4300	4000	3800	4150	3900	3700
	90	4450	4100	3850	4050	3850	3650	3800	3650	3500	3600	3450	3350
330x85	40	5200	4750	4400	4950	4550	4250	4750	4400	4150	4550	4300	4050
	90	4900	4500	4250	4500	4200	4000	4200	4000	3850	4000	3800	3700_{5}
360x85	40	5650	5150	4750	5350	4950	4600	5100	4750	4500	4950	4600	4400
	90	5300	4900	4600	4850	4550	4350	4550	4300	4150_{5}	4300	4100	3950_{5}
395x85	40	6150	5600	5150	5850	5350	5000	5600	5200	4900_{5}	5350	5050	4750_{5}
	90	5800	5300	5000_{5}	5250	4950	4700_{5}	4900	4700	4500_{5}	4650	4450_{5}	4300_{10}
425x85	40	6650	6000	5550_{5}	6250	5750	5350_{5}	6000	5550	5200_{5}	5750	5400	5100_{5}
	90	6200	5700	5300_{5}	5650	5300	5000_{5}	5250	5000_{5}	4800_{10}	4950_{5}	4750_{5}	4600_{10}
460x85	40	7150	6450	5950_{5}	6800	6200	5750_{10}	6450	6000	5600_{10}	6200	5800	5450_{10}
	90	6700	6150	5750_{10}	6100	5700	5400_{10}	5650	5400_{5}	5150_{15}	5350_{5}	5100_{10}	4950_{15}
495x85	40	7750	6950	6400_{10}	7300	6650	6200_{10}	6950	6400_{5}	6000_{10}	6650	6200_{5}	5850_{15}
	90	7200	6600	6150_{10}	6550	6100_{5}	5800_{15}	6050_{5}	5750_{10}	5500_{15}	5750_{10}	5500_{15}	5250_{20}
525x85	40	8200	7400_{5}	6800_{15}	7750	7050_{5}	6550_{15}	7350	6800_{5}	6350_{15}	7050	6600_{5}	6200_{15}
	90	7650	7000_{5}	6500_{15}	6950	6500_{5}	6100_{15}	6450_{5}	6100_{10}	5800_{20}	6050_{10}	5800_{15}	5550_{20}

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 GL 17 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, N3 & N4



EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
Rafter spacing = 600
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 GL 17C - 165 x 65

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
130x65	30	5750	5300	4700	4300	6750	6400	5850	5300
	40	5300	4850	4300	3900	6400	6050	5400	4950
	75	4400	4000	3500	3200	5500	5050	4450	4050
	90	4150	3750	3300	3000	5200	4750	4200	3850
165x65	30	7000	6600	6000	5500	7950	7550	6950	6550
	40	6600	6150	5500	5000	7550	7150	6550	6150
	75	5600	5100	4500	4100	6650	6250	5600	5150
	90	5300	4850	4250	3850	6400	6000	5300	4850
195x65	30	8050	7550	6900	6450	8900	8450	7850	7400
	40	7550	7100	6450	6000	8450	8000	7400	6950
	75	6550	6100	5350	4850	7500	7050	6450	6050
	90	6250	5750	5050	4600	7200	6800	6200	5700
230x65	30	9250	8700	7950	7400	9900	9450	8800	8300
	40	8700	8150	7400	6900	9450	9000	8300	7800
	75	7500	7000	6300	5800	8400	7950	7250	6800
	90	7200	6650	6000	5450	8100	7650	6950	6550
260x65	30	10300	9700	8800	8200	10750	10250	9550	9050
	40	9700	9050	8200	7650	10250	9750	9050	8550
	75	8350	7750	7000	6500	9150	8650	7950	7450
	90	8000	7400	6650	6150	8850	8350	7600	7150
295x65	30	11500	10850	9900	9200	11650	11150	10400	9900
	40	10850	10150	9200	8550	11150	10650	9900	9350
	75	9350	8700	7800	7250	10000	9450	8700	8150
	90	8950	8300	7450	6900	9650	9100	8350	7850
330x65	30	12000	12000	10950	10200	12000	12000	11250	10700
	40	12000	11250	10200	9450	12000	11450	10700	10100
	75	10350	9650	8650	8000	10800	10250	9400	8850
	90	9900	9200	8200	7600	10450	9850	9050	8500
360x65	30	12000	12000	11900	11050	12000	12000	11900	11350
	40	12000	12000	11050	10250	12000	12000	11350	10750
	75	11250	10450	9350	8650	11450	10850	10000	9400
	90	10750	9950	8900	8200	11100	10500	9650	9050
395x65	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	11200	12000	12000	12000	11450
	75	12000	11400	10200	9450	12000	11600	10700	10050
	90	11750	10850	9700	8950	11800	11200	10300	9650
425x65	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	75	12000	12000	10950	10100	12000	12000	11250	10600
	90	12000	11650	10400	9600	12000	11750	10850	10200
460x65	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	75	12000	12000	11850	10900	12000	12000	11900	11200
	90	12000	12000	11250	10350	12000	12000	11450	10800$_5$

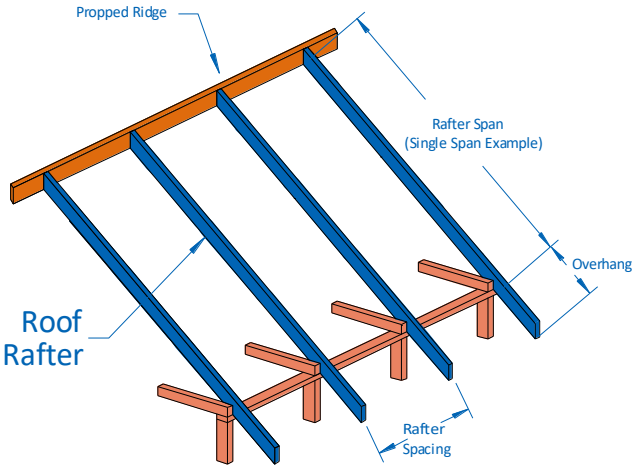
Single/continuous span roof rafter with ceiling attached - AS 4055 classification N1, N2, N3 & N4 (Cont'd)

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
130x85	30	6150	5700	5100	4650	7100	6750	6250	5800
	40	5700	5250	4650	4250	6750	6400	5800	5350
	75	4750	4350	3800	3500	5950	5450	4850	4400
	90	4500	4100	3600	3250	5650	5150	4550	4200
165x85	30	7400	7000	6400	5950	8300	7900	7350	6950
	40	7000	6550	5950	5450	7900	7500	6950	6550
	75	6050	5600	4900	4450	7050	6650	6050	5600
	90	5750	5250	4600	4200	6800	6350	5750	5300
195x85	30	8500	8000	7350	6850	9250	8850	8250	7800
	40	8000	7550	6850	6400	8850	8450	7800	7350
	75	6950	6500	5850	5300	7900	7450	6850	6400
	90	6650	6200	5500	5000	7600	7200	6550	6150
230x85	30	9750	9200	8450	7900	10300	9900	9250	8750
	40	9200	8650	7900	7350	9900	9450	8750	8250
	75	8000	7500	6750	6250	8850	8400	7700	7250
	90	7650	7150	6450	5950	8550	8100	7400	6950
260x85	30	10800	10250	9400	8800	11150	10700	10050	9550
	40	10250	9650	8800	8200	10700	10250	9550	9000
	75	8900	8300	7500	6950	9650	9150	8400	7900
	90	8550	7950	7150	6650	9300	8800	8100	7600
295x85	30	12000	11450	10500	9850	12000	11600	10900	10400
	40	11450	10800	9850	9150	11600	11100	10400	9850
	75	10000	9300	8400	7750	10500	9950	9200	8650
	90	9550	8900	8000	7400	10150	9600	8850	8300
330x85	30	12000	12000	11650	10900	12000	12000	11750	11200
	40	12000	11950	10900	10150	12000	11950	11200	10650
	75	11050	10300	9300	8600	11350	10750	9950	9350
	90	10600	9850	8850	8200	11000	10400	9600	9000
360x85	30	12000	12000	12000	11850	12000	12000	12000	11900
	40	12000	12000	11850	11000	12000	12000	11900	11300
	75	12000	11200	10050	9300	12000	11450	10600	9950
	90	11500	10700	9600	8850	11650	11050	10200	9600
395x85	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	75	12000	12000	11000	10150	12000	12000	11300	10650
	90	12000	11700	10450	9650	12000	11750	10900	10250
425x85	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	75	12000	12000	11800	10900	12000	12000	11850	11200
	90	12000	12000	11250	10350	12000	12000	11450	10800
460x85	30	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	12000	12000	12000	12000	12000	12000
	75	12000	12000	12000	11800	12000	12000	12000	11850
	90	12000	12000	12000	11200	12000	12000	12000	11400
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

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 190 x 19 (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 GL 17 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 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 GL 17C - 165 x 65

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
130x65	30	5500	5000	4000	3350	5900	5050	4000	3350
	40	5300	4850	4050	3400	5950	5100	4050	3400
	75	4400	4000	3500	3200	5500	5050	4150	3500
	90	4150	3750	3300	3000	5200	4750	4100	3450
165x65	30	6950	6300	5150	4350	7500	6450	5150	4350
	40	6600	6150	5200	4400	7550	6500	5200	4400
	75	5600	5100	4500	4100	6650	6250	5350	4550
	90	5300	4850	4250	3850	6400	6000	5200	4450
195x65	30	8050	7450	6150	5200	8900	7650	6150	5200
	40	7550	7100	6200	5250	8450	7750	6200	5250
	75	6550	6100	5350	4850	7500	7050	6350	5400
	90	6250	5750	5050	4600	7200	6800	6200	5300
230x65	30	9250	8700	7300	6200	9900	9050	7300	6200
	40	8700	8150	7350	6250	9450	9000	7350	6250
	75	7500	7000	6300	5800	8400	7950	7250	6400
	90	7200	6650	6000	5450	8100	7650	6950	6300
260x65	30	10300	9700	8250	7050	10750	10250	8250	7050
	40	9700	9050	8200	7100	10250	9750	8350	7100
	75	8350	7750	7000	6500	9150	8650	7950	7300_{5}
	90	8000	7400	6650	6150	8850	8350	7600	7100_{5}
295x65	30	11500	10850	9400	8050	11650	11150	9400	8050_{5}
	40	10850	10150	9200	8100	11150	10650	9500	8100_{5}
	75	9350	8700	7800	7250	10000	9450	8700	8150_{10}
	90	8950	8300	7450	6900	9650	9100	8350	7850_{10}
330x65	30	12000	12000	10550	9050	12000	12000	10550_{5}	9050_{10}
	40	12000	11250	10200	9150	12000	11450	10700_{5}	9150_{10}
	75	10350	9650	8650	8000	10800	10250	9400_{5}	8850_{15}
	90	9900	9200	8200	7600	10450	9850	9050_{5}	8500_{15}
360x65	30	12000	12000	11550	9900	12000	12000	11550_{10}	9900_{15}
	40	12000	12000	11050	10000	12000	12000	11350_{10}	10000_{20}
	75	11250	10450	9350	8650	11450	10850	10000_{5}	9400_{20}
	90	10750	9950	8900	8200	11100	10500	9650_{10}	9050_{20}
395x65	30	12000	12000	12000	10900	12000	12000	12000_{10}	10900_{20}
	40	12000	12000	12000	11000	12000	12000	12000_{10}	11000_{25}
	75	12000	11400	10200	9450	12000	11600	10700_{10}	10050_{25}
	90	11750	10850	9700	8950	11800	11200	10300_{10}	9650_{25}
425x65	30	12000	12000	12000	11750	12000	12000	12000_{10}	11750_{25}
	40	12000	12000	12000	11850	12000	12000	12000_{10}	11850_{30}
	75	12000	12000	10950	10100	12000	12000	11250_{15}	10600_{30}
	90	12000	11650	10400	9600	12000	11750	10850_{15}	10200_{30}
460x65	30	12000	12000	12000	12000	12000	12000	12000_{10}	12000_{30}
	40	12000	12000	12000	12000	12000	12000	12000_{10}	12000_{30}
	75	12000	12000	11850	10900	12000	12000	11900_{20}	11200_{35}
	90	12000	12000	11250	10350	12000	12000	11450_{20}	10800_{35}

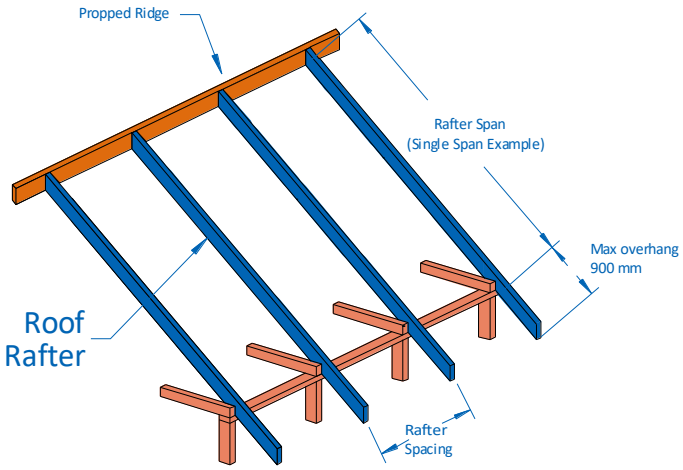
Single/continuous span roof rafter with ceiling attached - AS 4055 classification C1, C2 and C3 (Cont'd)

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
130x85	30	6000	5450	4600	3900	6750	5800	4600	3900
	40	5700	5250	4650	3950	6750	5850	4650	3950
	75	4750	4350	3800	3500	5950	5450	4800	4050
	90	4500	4100	3600	3250	5650	5150	4550	3950
165x85	30	7400	6900	5950	5000	8300	7400	5950	5000
	40	7000	6550	5950	5100	7900	7500	6000	5100
	75	6050	5600	4900	4450	7050	6650	6050	5200
	90	5750	5250	4600	4200	6800	6350	5750	5100
195x85	30	8500	8000	7050	6000	9250	8800	7050	6000
	40	8000	7550	6850	6050	8850	8450	7150	6050
	75	6950	6500	5850	5300	7900	7450	6850	6200
	90	6650	6200	5500	5000	7600	7200	6550	6050
230x85	30	9750	9200	8400	7150	10300	9900	8400	7150
	40	9200	8650	7900	7200	9900	9450	8450	7200
	75	8000	7500	6750	6250	8850	8400	7700	7250
	90	7650	7150	6450	5950	8550	8100	7400	6950
260x85	30	10800	10250	9400	8100	11150	10700	9500	8100
	40	10250	9650	8800	8200	10700	10250	9550	8200
	75	8900	8300	7500	6950	9650	9150	8400	7900
	90	8550	7950	7150	6650	9300	8800	8100	7600
295x85	30	12000	11450	10500	9250	12000	11600	10850	9250
	40	11450	10800	9850	9150	11600	11100	10400	9350
	75	10000	9300	8400	7750	10500	9950	9200	8650
	90	9550	8900	8000	7400	10150	9600	8850	8300
330x85	30	12000	12000	11650	10400	12000	12000	11750	10400_{5}
	40	12000	11950	10900	10150	12000	11950	11200	10500_{5}
	75	11050	10300	9300	8600	11350	10750	9950	93505
	90	10600	9850	8850	8200	11000	10400	9600	90005
360x85	30	12000	12000	12000	11400	12000	12000	12000	11400_{10}
	40	12000	12000	11850	11000	12000	12000	11900	11300_{10}
	75	12000	11200	10050	9300	12000	11450	10600	99501_{0}
	90	11500	10700	9600	8850	11650	11050	10200	96001_{0}
395x85	30	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	75	12000	12000	11000	10150	12000	12000	11300	10650_{10}
	90	12000	11700	10450	9650	12000	11750	10900	10250_{10}
425x85	30	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	75	12000	12000	11800	10900	12000	12000	11850_{5}	11200_{15}
	90	12000	12000	11250	10350	12000	12000	11450_{5}	10800_{15}
460x85	30	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	75	12000	12000	12000	11800	12000	12000	12000_{5}	11850_{20}
	90	12000	12000	12000	11200	12000	12000	12000_{5}	11400_{20}
495x85	30	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	75	12000	12000	12000	12000	12000	12000	12000_{5}	12000_{20}
	90	12000	12000	12000	12000	12000	12000	12000_{5}	12000_{25}

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 190 x 19 (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 GL 17 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, N3 & N4



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 GL 17C - 165 x 65

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
130x65	10	5900	5650	4950	4500	6950	6950	5950	5050
	20	5900	5650	4950	4500	6950	6900	6100	5150
	40	5300	4850	4300	3900	6400	6050	5400	4950
	60	4700	4300	3750	3450	5850	5400	4750	4350
165x65	10	7900	7200	6300	5700	9300	9000	7600	6500
	20	7600	7200	6300	5700	8500	8100	7550	6650
	40	6600	6150	5500	5000	7550	7150	6550	6150
	60	6000	5500	4850	4400	6950	6550	6000	5500
195x65	10	9350	8500	7400	6750	10250	9950	9050	7700
	20	8700	8250	7400	6750	9450	9050	8450	7900
	40	7550	7100	6450	6000	8450	8000	7400	6950
	60	6900	6450	5750	5250	7850	7400	6800	6350
230x65	10	11050	10000	8750	7950	11300	11000	10500	9200
	20	9950	9450	8700	7950	10500	10100	9450	9000
	40	8700	8150	7400	6900	9450	9000	8300	7800
	60	7950	7400	6650	6200	8800	8300	7650	7150
260x65	10	12000	11350	9900	9000	12000	11850	11350	10450
	20	11100	10500	9700	9000	11350	10900	10250	9750
	40	9700	9050	8200	7650	10250	9750	9050	8550
	60	8800	8200	7400	6900	9550	9050	8350	7800
295x65	10	12000	12000	11250	10200	12000	12000	12000	11850
	20	12000	11750	10850	10150	12000	11850	11150	10650
	40	10850	10150	9200	8550	11150	10650	9900	9350
	60	9900	9200	8300	7700	10400	9900	9100	8550
330x65	10	12000	12000	12000	11400	12000	12000	12000	12000
	20	12000	12000	12000	11250	12000	12000	12000	11450
	40	12000	11250	10200	9450	12000	11450	10700	10100
	60	10950	10200	9200	8500	11250	10700	9850	9300
360x65	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	11050	10250	12000	12000	11350	10750
	60	11900	11050	9950	9200	11900	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	11200	12000	12000	12000	11450
	60	12000	12000	10850	10050	12000	12000	11200	10550
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	11650	10750	12000	12000	11750	11100
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
	60	12000	12000	12000	11650	12000	12000	12000	11750

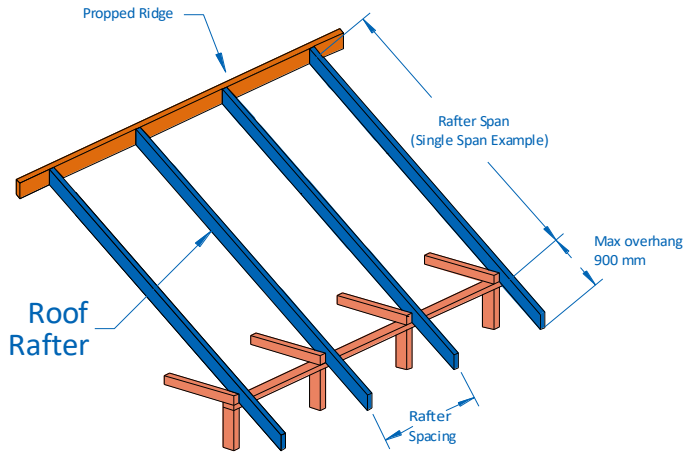
Single/continuous span roof rafter without ceiling attached AS 4055 classification N1, N2, N3 & N4 (Cont'd)

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
130x85	10	6750	6200	5400	4900	7950	7950	6850	5800
	20	6600	6200	5400	4900	7550	7250	6750	5950
	40	5700	5250	4650	4250	6750	6400	5800	5350
	60	5100	4650	4100	3750	6250	5800	5150	4750
165x85	10	8650	7850	6850	6250	9550	9250	8800	7450
	20	7950	7550	6850	6250	8800	8450	7900	7500
	40	7000	6550	5950	5450	7900	7500	6950	6550
	60	6400	5950	5250	4800	7350	6950	6350	5950
195x85	10	10000	9300	8100	7350	10500	10250	9800	8900
	20	9100	8650	8000	7350	9800	9450	8850	8450
	40	8000	7550	6850	6400	8850	8450	7800	7350
	60	7350	6850	6200	5700	8250	7800	7200	6750
230x85	10	11400	10950	9550	8700	11550	11300	10850	10450
	20	10400	9950	9200	8650	10850	10450	9900	9450
	40	9200	8650	7900	7350	9900	9450	8750	8250
	60	8450	7900	7150	6650	9250	8750	8100	7600
260x85	10	12000	12000	10800	9850	12000	12000	11700	11300
	20	11550	11050	10250	9650	11700	11300	10700	10250
	40	10250	9650	8800	8200	10700	10250	9550	9000
	60	9400	8800	7950	7400	10050	9550	8800	8300
295x85	10	12000	12000	12000	11150	12000	12000	12000	12000
	20	12000	12000	11450	10800	12000	12000	11600	11100
	40	11450	10800	9850	9150	11600	11100	10400	9850
	60	10500	9850	8900	8250	10900	10400	9600	9050
330x85	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	11950	12000	12000	12000	11950
	40	12000	11950	10900	10150	12000	11950	11200	10650
	60	11650	10900	9850	9150	11750	11200	10400	9800
360x85	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	12000	12000	12000	12000	12000	12000
	40	12000	12000	11850	11000	12000	12000	11900	11300
	60	12000	11850	10700	9900	12000	11900	11050	10450
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	11700	10800	12000	12000	11750	11150
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	11600	12000	12000	12000	11700
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 190 x 19 (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 GL 17 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 GL 17C - 165 x 65

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
130x65	10	5500	4950	3900	3300	5750	4950	3900	3300
	20	5500	5000	3950	3300	5800	5000	3950	3300
	40	5300	4850	4050	3400	5950	5100	4050	3400
	60	4700	4300	3750	3450	5850	5200	4150	3450
165x65	10	6950	6300	5050	4250	7350	6300	5050	4250
	20	6950	6300	5100	4300	7450	6400	5100	4300
	40	6600	6150	5200	4400	7550	6500	5200	4400
	60	6000	5500	4850	4400	6950	6550	5300	4500
195x65	10	8200	7450	6000	5100	8750	7500	6000	5100
	20	8200	7450	6050	5150	8850	7550	6050	5150
	40	7550	7100	6200	5250	8450	7750	6200	5250
	60	6900	6450	5750	5250	7850	7400	6350	5350
230x65	10	9700	8800	7150	6050	10350	8900	7150	6050
	20	9700	8800	7200	6100	10450	8950	7200	6100
	40	8700	8150	7350	6250	9450	9000	7350	6250
	60	7950	7400	6650	6200	8800	8300	7500	6400
260x65	10	10950	9950	8100	6900	11750	10100	8100	6900
	20	10950	9950	8200	6950	11350	10200	8200	6950
	40	9700	9050	8200	7100	10250	9750	8350	7100
	60	8800	8200	7400	6900	9550	9050	8350	7300_{5}
295x65	10	12000	11300	9200	7850	12000	11500	9200	7850
	20	12000	11300	9300	7950	12000	11600	9300	7950
	40	10850	10150	9200	8100	11150	10650	9500	8100_{5}
	60	9900	9200	8300	7700	10400	9900	9100	8300_{10}
330x65	10	12000	12000	10350	8850	12000	12000	10350	8850_{5}
	20	12000	12000	10450	8950	12000	12000	10450	8950_{5}
	40	12000	11250	10200	9150	12000	11450	10700_{5}	9150_{10}
	60	10950	10200	9200	8500	11250	10700	9850_{5}	9300_{15}
360x65	10	12000	12000	11350	9700	12000	12000	11350_{5}	9700_{10}
	20	12000	12000	11450	9800	12000	12000	11450_{5}	9800_{10}
	40	12000	12000	11050	10000	12000	12000	11350_{10}	10000_{20}
	60	11900	11050	9950	9200	11900	11350	10500_{10}	9900_{20}
395x65	10	12000	12000	12000	10650	12000	12000	12000_{5}	10650_{15}
	20	12000	12000	12000	10750	12000	12000	12000_{10}	10750_{20}
	40	12000	12000	12000	11000	12000	12000	12000_{10}	11000_{25}
	60	12000	12000	10850	10050	12000	12000	11200_{10}	10550_{25}
425x65	10	12000	12000	12000	11500	12000	12000	12000_{5}	11500_{20}
	20	12000	12000	12000	11600	12000	12000	12000_{10}	11600_{25}
	40	12000	12000	12000	11850	12000	12000	12000_{10}	11850_{30}
	60	12000	12000	11650	10750	12000	12000	11750_{15}	11100_{30}
460x65	10	12000	12000	12000	12000	12000	12000	12000_{5}	12000_{25}
	20	12000	12000	12000	12000	12000	12000	12000_{10}	12000_{25}
	40	12000	12000	12000	12000	12000	12000	12000_{10}	12000_{30}
	60	12000	12000	12000	11650	12000	12000	12000_{15}	11750_{35}

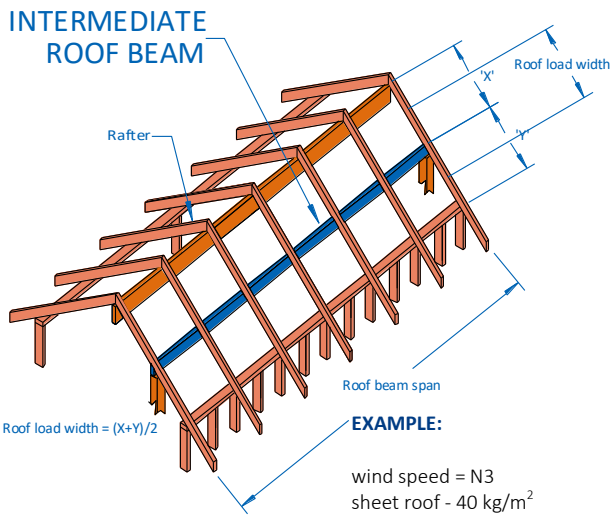
Single/continuous span roof rafter without ceiling attached AS 4055 classification C1, C2 and C3 (Cont'd)

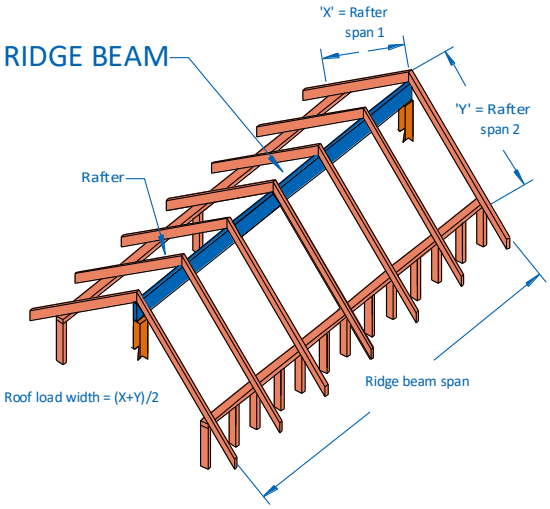
Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
130x85	10	6000	5450	4500	3800	6650	5650	4500	3800
	20	6000	5450	4550	3850	6700	5750	4550	3850
	40	5700	5250	4650	3950	6750	5850	4650	3950
	60	5100	4650	4100	3750	6250	5800	4750	4000
165x85	10	7600	6900	5800	4900	8450	7250	5800	4900
	20	7600	6900	5850	4950	8550	7350	5850	4950
	40	7000	6550	5950	5100	7900	7500	6000	5100
	60	6400	5950	5250	4800	7350	6950	6150	5200
195x85	10	9000	8150	6900	5850	10050	8600	6900	5850
	20	9000	8150	7000	5950	9800	8700	7000	5950
	40	8000	7550	6850	6050	8850	8450	7150	6050
	60	7350	6850	6200	5700	8250	7800	7200	6200
230x85	10	10600	9650	8200	7000	11550	10200	8200	7000
	20	10400	9650	8300	7050	10850	10350	8300	7050
	40	9200	8650	7900	7200	9900	9450	8450	7200
	60	8450	7900	7150	6650	9250	8750	8100	7400
260x85	10	12000	10900	9300	7950	12000	11600	9300	7950
	20	11550	10900	9400	8050	11700	11300	9400	8050
	40	10250	9650	8800	8200	10700	10250	9550	8200
	60	9400	8800	7950	7400	10050	9550	8800	8300
295x85	10	12000	12000	10600	9050	12000	12000	10600	9050
	20	12000	12000	10750	9150	12000	12000	10750	9150
	40	11450	10800	9850	9150	11600	11100	10400	9350
	60	10500	9850	8900	8250	10900	10400	9600	9050
330x85	10	12000	12000	11900	10200	12000	12000	11900	10200
	20	12000	12000	12000	10300	12000	12000	12000	10300
	40	12000	11950	10900	10150	12000	11950	11200	10500_{5}
	60	11650	10900	9850	9150	11750	11200	10400	9800_{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	11850	11000	12000	12000	11900	11300_{10}
	60	12000	11850	10700	9900	12000	11900	11050	10450_{10}
395x85	10	12000	12000	12000	12000	12000	12000	12000	12000_{5}
	20	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	60	12000	12000	11700	10800	12000	12000	11750	11150_{10}
425x85	10	12000	12000	12000	12000	12000	12000	12000	12000_{5}
	20	12000	12000	12000	12000	12000	12000	12000	12000_{10}
	40	12000	12000	12000	12000	12000	12000	12000	12000_{15}
	60	12000	12000	12000	11600	12000	12000	12000	11700_{15}
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	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_{15}
	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 GL 17 in this table are stocked in each state. Please check with your supplier before ordering

Ridge/Intermediate roof beam
AS 4055 Classification N1, N2, N3 & N4





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 GL 17C - 230 x 65 mm

Roof load width (mm)		1800	3000	4200	5400	6600	7800	1800	3000	4200	5400	6600	7800
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Ridge/Intermediate beam span (mm)											
		Single span						Continuous span					
130x65	40	3350	2750	2400	2150	2000	1850	4000	3050	2550	2250	2050	1850
	75	2750	2250	2000	1800	1700	1550	3500	2800	2350	2050	1850	1700
165x65	40	4250	3550	3100	2800	2550	2350	5250	3900	3250	2850	2550	2350
	75	3500	2900	2550	2350	2150	2000	4450	3550	2950	2600	2350	2150
195x65	40	5100	4200	3700	3350	3050	2800	6250	4600	3850	3400	3050	2800
	75	4200	3450	3050	2800	2550	2400	5250	4150	3500	3100	2750	2550
230x65	40	6050	5000	4400	3950	3600	3250	7000	5400	4550	4000	3600	3250
	75	5000	4150	3650	3300	3050	2850	6150	4900	4150	3600	3250	3000
260x65	40	6700	5700	5000	4500	4050	3700	7700	6100	5150	4500	4050	3700_{5}
	75	5650	4700	4150	3750	3450	3250	6700	5550	4650	4100	3700_{5}	3350_{10}
295x65	40	7500	6450	5750	5100	4600	4200_{5}	8400	7050	5800	5100	4600_{5}	4200_{15}
	75	6400	5400	4750	4300	3950_{5}	3700_{5}	7350	6300	5300	4650_{5}	4200_{15}	3850_{20}
330x65	40	8300	7100	6350	5700	5150_{5}	4700_{10}	9100	7950	6500	5700_{5}	5150_{15}	4700_{25}
	75	7050	6050	5350	4850	4500_{5}	4200_{10}	8000	7050	5900_{5}	5200_{15}	4700_{25}	4300_{35}
360x65	40	9000	7650	6900	6200_{5}	5600_{10}	5100_{15}	9700	8550	7100_{5}	6200_{15}	5600_{25}	5100_{35}
	75	7600	6550	5900	5350_{5}	4900_{10}	4600_{15}	8500	7500	6450_{10}	5650_{20}	5100_{35}	4650_{45}
395x65	40	9800	8350	7450	6800_{10}	6150_{15}	5600_{15}	10350	9150	7750_{10}	6800_{20}	6150_{35}	5600_{45}
	75	8300	7100	6400_{5}	5900_{10}	5450_{15}	5050_{20}	9100	8050	7050_{20}	6200_{30}	5600_{45}	5100_{55}
425x65	40	10500	8950	8000_{5}	7300_{10}	6600_{15}	6050_{20}	10900	9650	8350_{15}	7350_{30}	6600_{40}	6050_{55}
	75	8850	7600	6800_{5}	6300_{15}	5900_{20}	5500_{25}	9600	8450_{5}	7600_{25}	6700_{40}	6000_{55}	5500_{75}
460x65	40	11350	9650	8600_{5}	7850_{15}	7150_{20}	6500_{25}	11550	10200_{5}	9100_{25}	7950_{40}	7150_{50}	6500_{70}
	75	9550	8150	7300_{10}	6750_{15}	6300_{25}	5950_{30}	10150	9000_{10}	8200_{35}	7200_{50}	6500_{70}	5950_{90}
495x65	40	12000	10350	9200_{10}	8400_{20}	7650_{25}	7000_{30}	12000	10800_{10}	9900_{35}	8500_{50}	7650_{65}	7000_{90}
	75	10250	8700	7800_{10}	7200_{20}	6750_{30}	6400_{35}	10700	9500_{15}	8700_{40}	7750_{60}	7000_{90}	6400_{105}

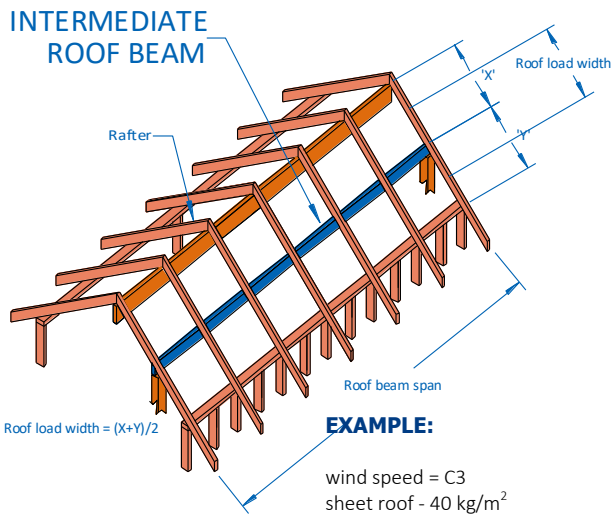
Ridge/Intermediate roof beam
AS 4055 Classification N1, N2, N3 & N4 (Cont'd)

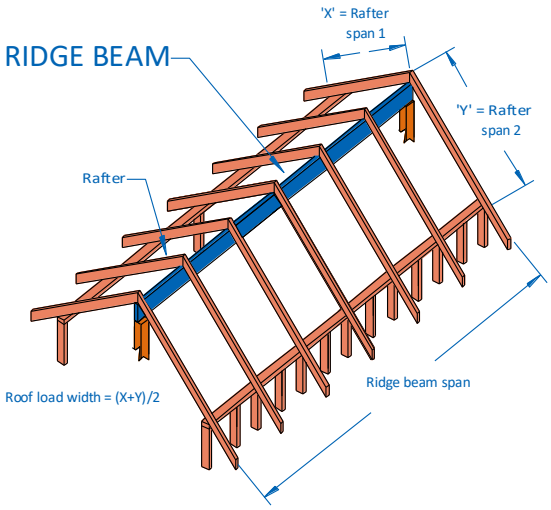
Roof load width (mm)		1800	3000	4200	5400	6600	7800	1800	3000	4200	5400	6600	7800
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Ridge/Intermediate beam span (mm)											
		Single span						Continuous span					
130x85	40	3650	3000	2650	2400	2200	2050	4600	3500	2950	2600	2300	2100
	75	3000	2500	2200	2000	1850	1700	3850	3200	2650	2350	2100	1950
165x85	40	4650	3850	3400	3050	2800	2600	5800	4450	3750	3250	2950	2700
	75	3850	3200	2800	2550	2350	2200	4850	4050	3400	3000	2700	2450
195x85	40	5550	4600	4050	3650	3350	3100	6600	5250	4400	3850	3450	3150
	75	4600	3800	3350	3050	2800	2650	5700	4750	4000	3500	3150	2900
230x85	40	6500	5500	4800	4350	4000	3700	7450	6200	5200	4550	4100	3750
	75	5450	4550	4000	3600	3350	3150	6500	5600	4700	4150	3750	3400
260x85	40	7200	6200	5500	4950	4550	4200	8150	7100	5850	5150	4600	4200
	75	6150	5150	4550	4150	3800	3550	7150	6300	5350	4700	4200	3850
295x85	40	8050	6900	6250	5650	5200	4800	8900	7850	6650	5800	5250	4800
	75	6900	5900	5200	4700	4350	4100	7800	6900	6050	5300	4800_{5}	4350_{10}
330x85	40	8900	7650	6850	6300	5850	5350_{5}	9650	8550	7400	6500	5850_{5}	5350_{10}
	75	7600	6550	5900	5350	4900	4600_{5}	8500	7500	6750	5950_{5}	5350_{10}	4900_{20}
360x85	40	9650	8250	7400	6800	6350_{5}	5850_{5}	10250	9100	8100	7100_{5}	6400_{10}	5850_{20}
	75	8200	7050	6350	5850	5400_{5}	5050_{10}	9050	8000	7350	6450_{10}	5800_{20}	5350_{30}
395x85	40	10550	9000	8050	7400	6900_{5}	6400_{10}	10950	9700	8900	7800_{10}	7000_{20}	6400_{30}
	75	8950	7650	6900	6400_{5}	6000_{10}	5600_{15}	9650	8550	7850_{5}	7100_{20}	6400_{30}	5850_{40}
425x85	40	11350	9650	8650	7900_{5}	7350_{10}	6900_{15}	11550	10250	9400_{5}	8350_{15}	7500_{25}	6900_{35}
	75	9600	8200	7350	6800_{5}	6350_{10}	6050_{15}	10200	9000	8300_{10}	7600_{25}	6850_{35}	6300_{50}
460x85	40	12000	10400	9300	8500_{5}	7900_{10}	7450_{20}	12000	10850	9950_{10}	9050_{25}	8150_{35}	7450_{45}
	75	10350	8800	7900	7300_{10}	6850_{15}	6450_{20}	10800	9550	8800_{15}	8200_{35}	7400_{45}	6800_{60}
495x85	40	12000	11200	9950_{5}	9100_{10}	8450_{15}	7950_{20}	12000	11450	10500_{15}	9700_{30}	8750_{45}	8000_{55}
	75	11100	9450	8450_{5}	7800_{10}	7300_{15}	6900_{25}	11350	10100	9250_{20}	8650_{40}	8000_{55}	7300_{80}
525x85	40	12000	11900	10550_{5}	9650_{10}	8950_{20}	8400_{25}	12000	11900	10950_{20}	10250_{40}	9300_{50}	8500_{70}
	75	11800	10000	8950_{5}	8250_{15}	7700_{20}	7250_{25}	11850	10500	9650_{25}	905045	8450_{70}	7750_{90}
560x85	40	12000	12000	11250_{10}	10250_{15}	9500_{20}	8900_{30}	12000	12000	11500_{25}	10750_{45}	9900_{65}	9050_{85}
	75	12000	10650	9500_{10}	8750_{15}	8150_{25}	7700_{30}	12000	11050_{5}	10150_{30}	9500_{50}	9000_{85}	8250_{100}
590x85	40	12000	12000	11900_{10}	10800_{20}	10000_{25}	9400_{30}	12000	12000	11900_{25}	11150_{50}	10400_{80}	9550_{95}
	75	12000	11250	10000_{10}	9200_{20}	8550_{25}	8100_{35}	12000	11450_{10}	10550_{35}	9850_{55}	9350_{95}	8700_{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. rafter spacing up to 1200 mm
4. Not all sizes of SmartLam GL 17C in this table are stocked in each state. Please check with your supplier before ordering

Ridge/Intermediate roof beam
AS 4055 Classification C1, C2 & 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 GL 17C - 295 x 65 mm

Roof load width (mm)		1800	3000	4200	5400	6600	7800	1800	3000	4200	5400	6600	7800
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Ridge/Intermediate beam span (mm)											
		Single span						Continuous span					
130x65	40	2700	2100	1750	1550	1400	1300	2700	2100	1750	1550	1400	1300
	75	2750	2100	1800	1550	1400	1300	2750	2100	1800	1550	1400	1300
165x65	40	3400	2650	2250	1950	1800	1650	3400	2650	2250	1950	1800	1650
	75	3500	2700	2250	2000	1800	1650	3500	2700	2250	2000	1800	1650
195x65	40	4100	3100	2650	2350	2100	1950	4100	3100	2650	2350	2100	1950
	75	4200	3200	2700	2350	2150	1950	4200	3200	2700	2350	2150	1950_{10}
230x65	40	4900	3700	3100	2750	2500	2300_{5}	4900	3700	3100	2750	2500_{5}	2300_{15}
	75	5000	3750	3150	2800	2500_{5}	2300_{10}	5000	3750	3150	2800_{5}	2500_{15}	2300_{25}
260x65	40	5600	4150	3500	3100	2800_{5}	2600_{10}	5600	4150	3500	3100_{5}	2800_{15}	2600_{25}
	75	5650	4250	3550	3150_{5}	2850_{10}	2600_{15}	5750	4250	3550_{5}	3150_{15}	2850_{25}	2600_{35}
295x65	40	6450	4700	4000	3550_{5}	3200_{10}	2950_{15}	6450	4700	4000_{5}	3550_{20}	3200_{30}	2950_{40}
	75	6400	4800	4050_{5}	3550_{10}	3200_{15}	2950_{20}	6550	4800	4050_{15}	3550_{30}	3200_{40}	2950_{50}
330x65	40	7250	5300	4450_{5}	3950_{10}	3600_{15}	3300_{20}	7250	5300	4450_{15}	3950_{30}	3600_{40}	3300_{50}
	75	7050	5350_{5}	4550_{10}	4000_{15}	3600_{20}	3300_{25}	7400	5350_{10}	4550_{25}	4000_{40}	3600_{55}	3300_{75}
360x65	40	7950	5750	4900_{10}	4300_{15}	3900_{20}	3600_{25}	7950	5750_{10}	4900_{25}	4300_{40}	3900_{50}	3600_{70}
	75	7600	5850_{5}	4950_{15}	4350_{20}	3900_{25}	3600_{30}	8100_{5}	5850_{20}	4950_{35}	4350_{50}	3900_{75}	3600_{95}
395x65	40	8800	6400_{5}	5350_{15}	4750_{20}	4300_{25}	3950_{30}	8800	6400_{15}	5350_{35}	4750_{50}	4300_{70}	3950_{90}
	75	8300	6500_{10}	5400_{20}	4750_{25}	4300_{30}	3950_{40}	8900_{10}	6500_{30}	5400_{50}	4750_{70}	4300_{95}	3950_{110}
425x65	40	9500	6950_{10}	5750_{15}	5100_{25}	4600_{30}	4250_{35}	9500_{10}	6950_{25}	5750_{40}	5100_{60}	4600_{90}	4250_{105}
	75	8850_{5}	7050_{15}	5850_{25}	5150_{30}	4650_{35}	4250_{45}	9600_{20}	7050_{40}	5850_{60}	5150_{90}	4650_{105}	4250_{120}
460x65	40	10300_{5}	7600_{15}	6250_{20}	5500_{30}	5000_{35}	4600_{40}	10300_{15}	7600_{35}	6250_{55}	5500_{85}	5000_{100}	4600_{115}
	75	9550_{5}	7700_{20}	6300_{25}	5550_{35}	5000_{45}	4600_{50}	10150_{25}	7700_{50}	6300_{80}	5550_{100}	5000_{120}	4600_{140}
495x65	40	11150_{10}	8200_{15}	6700_{25}	5950_{35}	5400_{40}	4950_{45}	11150_{20}	8200_{45}	6700_{65}	5950_{95}	5400_{115}	4950_{130}
	75	10250_{10}	8300_{25}	6800_{30}	5950_{40}	5400_{50}	4950_{55}	10700_{30}	8300_{60}	6800_{95}	5950_{115}	5400_{135}	4950_{155}

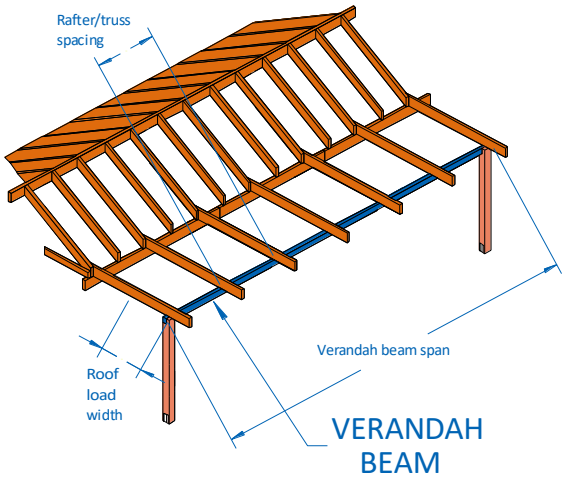
Single span Ridge/Intermediate roof beam
AS 4055 Classification C1, C2 & C3 [Cont'd]

Roof load width (mm)		1800	3000	4200	5400	6600	7800	1800	3000	4200	5400	6600	7800
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Ridge/Intermediate beam span (mm)											
		Single span						Continuous span					
130x85	40	3050	2400	2000	1800	1600	1500	3050	2400	2000	1800	1600	1500
	75	3000	2450	2050	1800	1600	1500	3150	2450	2050	1800	1600	1500
165x85	40	3950	3000	2550	2250	2050	1900	3950	3000	2550	2250	2050	1900
	75	3850	3100	2600	2300	2050	1900	4050	3100	2600	2300	2050	1900
195x85	40	4750	3550	3000	2650	2400	2250	4750	3550	3000	2650	2400	2250
	75	4600	3650	3050	2700	2450	2250	4850	3650	3050	2700	2450	2250
230x85	40	5700	4200	3550	3150	2850	2650	5700	4200	3550	3150	2850	2650
	75	5450	4300	3600	3200	2850	2650_{5}	5800	4300	3600	3200	2850_{5}	2650_{10}
260x85	40	6500	4750	4050	3550	3250	3000_{5}	6500	4750	4050	3550	3250_{5}	3000_{15}
	75	6150	4850	4100	3600	3250_{5}	2950_{10}	6600	4850	4100	3600_{5}	3250_{15}	2950_{20}
295x85	40	7450	5400	4550	4050	3650_{5}	3400_{10}	7450	5400	4550	4050_{5}	3650_{15}	3400_{25}
	75	6900	5500	4650	4050_{5}	3700_{10}	3350_{15}	7550	5500	4650_{5}	4050_{15}	3700_{25}	3350_{35}
330x85	40	8400	6050	5100	4500_{5}	4100_{10}	3800_{15}	8400	6050	5100_{5}	4500_{15}	4100_{25}	3800_{35}
	75	7600	6150	5200_{5}	4550_{10}	4100_{15}	3750_{20}	8500	6150	5200_{15}	4550_{25}	4100_{40}	3750_{50}
360x85	40	9200	6700	5600_{5}	4950_{10}	4450_{15}	4100_{20}	9200	6700	5600_{10}	4950_{25}	4450_{35}	4100_{45}
	75	8200	6800_{5}	5650_{10}	4950_{15}	4500_{20}	4100_{25}	9050	6800_{10}	5650_{20}	4950_{35}	4500_{50}	4100_{60}
395x85	40	10150	7450	6150_{10}	5400_{15}	4900_{20}	4500_{25}	10150	7450_{10}	6150_{20}	5400_{35}	4900_{45}	4500_{60}
	75	8950	7500_{5}	6200_{10}	5450_{20}	4900_{25}	4500_{30}	9650	7500_{20}	6200_{30}	5450_{45}	4900_{65}	4500_{85}
425x85	40	10950	8050_{5}	6600_{10}	5850_{15}	5300_{20}	4850_{25}	10950	8050_{15}	6600_{30}	5850_{45}	5300_{55}	4850_{80}
	75	9600	8150_{10}	6650_{15}	5850_{20}	5300_{30}	4850_{35}	10200	8150_{25}	6650_{40}	5850_{55}	5300_{85}	4850_{100}
460x85	40	11900	8800_{10}	7150_{15}	6300_{20}	5700_{25}	5250_{30}	11900_{5}	8800_{25}	7150_{35}	6300_{55}	5700_{80}	5250_{95}
	75	10350	8800_{15}	7200_{20}	6350_{25}	5700_{35}	5250_{40}	10800_{5}	8900_{35}	7200_{50}	6350_{80}	5700_{95}	5250_{110}
495x85	40	12000	9550_{10}	7700_{20}	6800_{25}	6150_{30}	5650_{35}	12000_{5}	9550_{30}	7700_{45}	6800_{70}	6150_{90}	5650_{105}
	75	11100	9450_{15}	7750_{25}	6800_{30}	6150_{40}	5650_{45}	11350_{10}	9600_{45}	7750_{65}	6800_{90}	6150_{110}	5650_{125}
525x85	40	12000	10150_{15}	8150_{20}	7200_{30}	6550_{35}	6000_{40}	12000_{5}	10150_{40}	8150_{55}	7200_{85}	6550_{100}	6000_{120}
	75	11800_{5}	10000_{20}	8200_{25}	7250_{35}	6500_{45}	6000_{50}	11850_{15}	10250_{55}	8200_{80}	7250_{100}	6500_{120}	6000_{140}
560x85	40	12000	10900_{20}	8750_{25}	7700_{35}	6950_{40}	6400_{45}	12000_{5}	10900_{45}	8750_{70}	7700_{95}	6950_{115}	6400_{130}
	75	12000_{5}	10650_{25}	8800_{30}	7700_{40}	6950_{50}	6400_{55}	12000_{15}	10950_{65}	8800_{95}	7700_{115}	6950_{135}	6400_{150}
590x85	40	12000	11550_{20}	9300_{30}	8100_{35}	7350_{45}	6750_{50}	12000_{5}	11550_{55}	9300_{85}	8100_{105}	7350_{125}	6750_{140}
	75	12000_{5}	11250_{25}	9350_{35}	8100_{45}	7350_{50}	6700_{60}	12000_{15}	11450_{80}	9350_{105}	8100_{125}	7350_{145}	6700_{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 GL 17 in this table are stocked in each state. Please check with your supplier before ordering

Single span Verandah beam
AS 4055 Classification N1, N2, N3 & N4



EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
roof load width = 3900 mm
rafter/truss spacing = 600 mm
verandah span = 3500 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 GL 17C - 195 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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Single span									
130x65	40	2700	2800	1900	1900	1500	1300	1300	NS	1100	NS
	75	2400	2400	1700	1600	1400	1200	1100	NS	NS	NS
165x65	40	3500	3500	2400	2500	1900	1900	1600	1500	1400_{5}	NS
	75	3100	3100	2200	2200	1800	1700	1500	1300	1300_{5}	NS
195x65	40	4200	4200	2900	2900	2300	2300	1900	1900	1700	1500_{20}
	75	3700	3600	2600	2700	2100	2100	1800	1800_{5}	1600_{10}	1000_{5}
230x65	40	4800	4800	3500	3500	2800	2800_{5}	2300	2300_{5}	2000_{5}	1800_{10}
	75	4300	4300	3200	3100	2500	2600_{5}	2200_{10}	2100_{10}	1900_{10}	1600_{30}
260x65	40	5400	5400	4000	4000	3200	3100	2600_{5}	2700_{15}	2300_{15}	2200_{20}
	75	4800	4800	3600	3600	2900	2900_{5}	2500_{15}	2400_{20}	2200_{30}	1800_{25}
295x65	40	6100	6000	4500	4400	3600_{5}	3600_{5}	3000_{10}	3000_{20}	2600_{25}	2600_{35}
	75	5400	5400	4100	4100	3300	3300_{5}	2800_{20}	2800_{30}	2500_{35}	2400_{45}
330x65	40	6700	6700	4900	4900	4100_{10}	4100_{15}	3500_{20}	3400_{15}	3000_{30}	3000_{40}
	75	6000	5900	4500	4500	3800_{10}	3700_{5}	3200_{15}	3200_{25}	2800_{35}	2800_{45}
360x65	40	7300	7300	5300	5300_{5}	4400_{10}	4400_{15}	3800_{25}	3700_{20}	3300_{25}	3200_{35}
	75	6500	6500	4900	4900_{5}	4100_{10}	4100_{10}	3500_{30}	3500_{20}	3100_{40}	3000_{55}
395x65	40	8000	8000	5800	5800	4800_{15}	4700_{20}	4100_{25}	4100_{20}	3600_{45}	3600_{35}
	75	7100	7100	5300	5300_{5}	4400_{10}	4400_{20}	3900_{30}	3900_{25}	3400_{35}	3400_{50}
425x65	40	8700	8700	6200_{5}	6200	5100_{15}	5100_{20}	4400_{30}	4400_{40}	3900_{45}	3900_{40}
	75	7600	7600	5700_{5}	5700_{5}	4800_{20}	4700_{15}	4200_{30}	4200_{30}	3700_{60}	3600_{45}
460x65	40	9400	9400	6700_{5}	6700_{10}	5500_{20}	5500_{30}	4700_{40}	4700_{35}	4200_{45}	4200_{40}
	75	8300	8300	6100_{10}	6100_{5}	5100_{20}	5100_{30}	4500_{40}	4400_{50}	4000_{60}	4000_{50}
495x65	40	10200	10200	7300_{10}	7200_{15}	5900_{20}	5800_{25}	5000_{40}	5000_{45}	4500_{55}	4500_{65}
	75	8900	8900	6600_{10}	6600_{5}	5500_{20}	5400_{30}	4800_{50}	4700_{60}	4300_{60}	4300_{55}

Single span Verandah beam
AS 4055 Classification N1, N2, N3 & N4 [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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Single span									
130x85	40	3000	3000	2100	2100	1600	1600	1400	1200	1200	NS
	75	2600	2700	1900	1900	1500	1400	1300	1100	1100	NS
165x85	40	3900	3900	2700	2700	2100	2100	1800	1800	1500	1400_{5}
	75	3400	3300	2400	2500	1900	1900	1600	1600	1500	1100
195x85	40	4500	4500	3200	3200	2500	2600	2100	2100	1800	1800
	75	4000	4000	2900	2900	2300	2300	2000	1900	1700	1600_{10}
230x85	40	5200	5200	3900	3800	3000	3000	2500	2600_{5}	2200_{5}	2200_{5}
	75	4600	4600	3500	3400	2800	2800	2400	2300_{10}	2100	2000_{10}
260x85	40	5800	5800	4300	4300	3500	3400	2900	2900_{5}	2500_{10}	2500_{20}
	75	5200	5200	4000	3900	3200	3200	2700	2700_{15}	2400_{15}	2300_{25}
295x85	40	6500	6500	4800	4800	4000	4000	3400	3300_{5}	2900_{15}	2900_{25}
	75	5800	5800	4400	4400	3700	3600	3100_{5}	3100_{10}	2700_{15}	2800_{25}
330x85	40	7300	7300	5300	5300	4400	4400	3800_{10}	3700_{10}	3300_{10}	3200_{20}
	75	6500	6500	4900	4900	4100_{5}	4100_{10}	3500_{15}	3500_{10}	3100_{20}	3100_{35}
360x85	40	7900	7900	5800	5800	4800_{5}	4700	4100_{10}	4100_{10}	3600_{25}	3600_{20}
	75	7000	7000	5300	5300	4400	4400_{5}	3900_{15}	3800_{15}	3400_{20}	3300_{30}
395x85	40	8700	8700	6300	6300	5200_{5}	5200_{10}	4500_{15}	4400_{20}	4000_{25}	4000_{25}
	75	7700	7700	5800	5700	4800_{10}	4800_{15}	4200_{25}	4200_{30}	3800_{35}	3700_{30}
425x85	40	9400	9400	6800	6800	5500_{10}	5500_{15}	4800_{20}	4700_{30}	4200_{35}	4200_{45}
	75	8300	8300	6200	6200	5100_{10}	5100_{15}	4500_{20}	4500_{30}	4000_{40}	4000_{35}
460x85	40	10300	10200	7300	7300_{5}	6000_{15}	5900_{10}	5100_{20}	5100_{30}	4600_{30}	4500_{40}
	75	9000	9000	6700	6700_{5}	5500_{15}	5500_{20}	4800_{30}	4800_{35}	4300_{45}	4300_{60}
495x85	40	11100	11100	7900	7900_{5}	6400_{15}	6400_{10}	5500_{20}	5500_{30}	4900_{45}	4800_{50}
	75	9800	9700	7200_{5}	7200_{5}	5900_{20}	5900_{15}	5200_{30}	5100_{35}	4600_{45}	4600_{55}
525x85	40	11900	11800	8400_{5}	8400_{5}	6800_{20}	6800_{25}	5800_{30}	5800_{35}	5100_{45}	5100_{50}
	75	10400	10400	7600_{5}	7600_{5}	6300_{20}	6200_{15}	5400_{30}	5400_{35}	4900_{60}	4800_{70}
560x85	40	12000	12000	9000_{5}	9000_{5}	7200_{20}	7200_{25}	6200_{35}	6100_{30}	5400_{45}	5400_{55}
	75	11200	11100	8100_{10}	8100_{10}	6700_{20}	6700_{15}	5800_{40}	5800_{45}	5200_{60}	5200_{70}
590x85	40	12000	12000	9500_{10}	9500_{10}	7600_{25}	7600_{25}	6500_{35}	6500_{30}	5700_{55}	5700_{65}
	75	11900	11800	8600_{10}	8600_{10}	7000_{25}	7000_{30}	6100_{45}	6100_{45}	5400_{60}	5400_{70}

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 GL 17 in this table are stocked in each state. Please check with your supplier before ordering

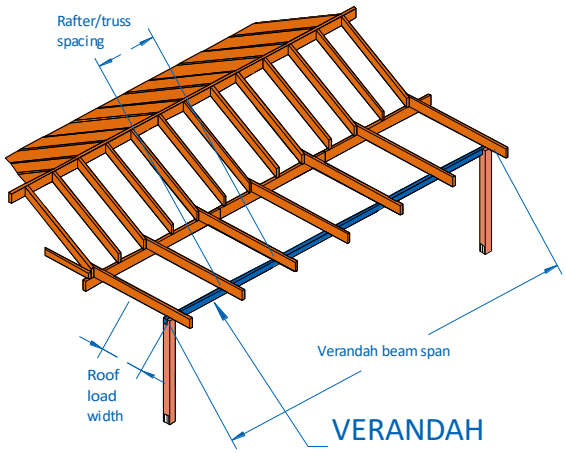
Continuous span Verandah beam
AS 4055 Classification N1, N2, N3 & N4

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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Continuous span									
130x65	40	3400	3400	2300	2300	1800	1700	1500	1200	1300	NS
	75	3000	3000	2200	2100	1700	1500	1400	NS	NS	NS
165x65	40	4300	4300	3000	2900	2300	2200	1900	1600	1500	1000
	75	3800	3800	2800	2800	2200	2100	1600	1400	1400	NS
195x65	40	4800	4800	3500	3400	2700	2700	2200	2100	1700	1400_{5}
	75	4400	4400	3300	3200	2600	2600	2100	1600_{5}	1500_{5}	1000
230x65	40	5500	5500	4100	4100	3200	3200	2700_{10}	2700_{10}	2100_{20}	1800_{10}
	75	5000	5000	3900	3900	3000	3000	2400_{15}	2500_{15}	1700_{15}	1400_{15}
260x65	40	6000	6000	4700	4600	3600_{5}	3600_{5}	3000_{20}	3000_{20}	2500_{35}	2600_{40}
	75	5400	5400	4300	4300	3500_{10}	3400_{5}	2800_{25}	2800_{30}	2000_{30}	1600_{10}
295x65	40	6500	6500	5100	5100	4100_{15}	4100_{15}	3400_{30}	3400_{25}	2800_{50}	2900_{55}
	75	6000	6000	4800	4700	3900_{20}	3900_{20}	3200_{40}	3200_{40}	2600_{75}	2600_{60}
330x65	40	7000	7100	5600	5600	4600_{25}	4600_{25}	3800_{45}	3800_{45}	3200_{80}	3100_{70}
	75	6500	6500	5200	5200	4400_{30}	4400_{30}	3600_{55}	3300_{50}	2700_{85}	2800_{90}
360x65	40	7400	7600	5900_{5}	6000_{5}	5000_{35}	5000_{35}	4200_{60}	4200_{60}	3400_{95}	3200_{80}
	75	6800	6900	5500_{5}	5500_{5}	4800_{40}	4700_{40}	3900_{75}	3500_{55}	3200_{110}	3000_{100}
395x65	40	7800	8100	6400_{10}	6400_{10}	5400_{45}	5400_{40}	4600_{85}	4600_{85}	3900_{110}	3400_{90}
	75	7200	7400	5900_{10}	5900_{10}	5100_{50}	5100_{50}	4300_{95}	4300_{95}	3400_{120}	3100_{105}
425x65	40	8100	8600	6700_{15}	6700_{15}	5700_{50}	5700_{50}	4900_{95}	4900_{95}	4200_{125}	3600_{105}
	75	7500	7800	6200_{20}	6200_{20}	5400_{55}	5400_{55}	4600_{105}	4600_{105}	3600_{135}	3600_{135}
460x65	40	8500	9000	7000_{15}	7100_{20}	6100_{60}	6100_{60}	5300_{110}	5300_{110}	4500_{140}	4300_{135}
	75	7900	8300	6600_{20}	6600_{20}	5700_{70}	5700_{70}	5000_{120}	4900_{120}	3900_{145}	3700_{140}
495x65	40	8900	9500	7300_{20}	7500_{25}	6400_{75}	6400_{70}	5700_{120}	5700_{120}	4900_{160}	4800_{155}
	75	8200	8700	6900_{25}	7000_{30}	6000_{85}	6000_{85}	5300_{135}	5300_{135}	4300_{165}	3800_{145}
130x85	40	3800	3800	2700	2600	2100	2000	1700	1500	1400	NS
	75	3300	3200	2400	2400	1900	1900	1500	1500	1300	NS
165x85	40	4500	4500	3400	3300	2600	2700	2200	2100	1700	1600
	75	4100	4100	3100	3000	2500	2500	2000	1900	1600	1300
195x85	40	5100	5200	4000	4000	3100	3100	2600	2600	2200	1700
	75	4700	4700	3600	3600	2900	2900	2400	2400_{5}	1700	1600
230x85	40	5800	5800	4500	4500	3700	3600	3000	3000	2600_{10}	2600_{15}
	75	5300	5300	4200	4200	3500	3400	2800_{5}	2800_{5}	2300_{15}	1800
260x85	40	6300	6300	5000	5000	4200	4200	3500_{10}	3400_{10}	2900_{20}	2900_{25}
	75	5800	5800	4600	4600	4000	3900	3200_{15}	3100_{15}	2500_{30}	2700_{35}
295x85	40	6900	6900	5500	5500	4600	4600	3900_{20}	3900_{20}	3300_{35}	3200_{35}
	75	6300	6300	5100	5100	4400_{5}	4300_{5}	3600_{25}	3600_{25}	3000_{45}	3000_{45}
330x85	40	7300	7500	5900	5900	5000_{10}	5000_{10}	4400_{30}	4400_{30}	3700_{50}	3400_{40}
	75	6800	6900	5500	5500	4800_{15}	4700_{15}	4100_{40}	4100_{40}	3300_{65}	3300_{55}
360x85	40	7700	8000	6300	6300	5400_{15}	5400_{15}	4800_{40}	4700_{40}	4000_{65}	4000_{65}
	75	7200	7300	5900	5900	5100_{20}	5100_{20}	4400_{50}	4400_{50}	3700_{85}	3400_{65}
395x85	40	8100	8600	6700	6700	5800_{20}	5800_{20}	5100_{50}	5100_{50}	4400_{90}	4400_{90}
	75	7600	7800	6300	6300	5400_{25}	5400_{25}	4900_{65}	4800_{65}	4100_{105}	3600_{85}
425x85	40	8500	9000	7000	7100	6100_{25}	6100_{25}	5400_{55}	5400_{55}	4800_{100}	4700_{100}
	75	7900	8300	6600	6600	5700_{30}	5800_{30}	5100_{85}	5100_{80}	4400_{115}	4400_{115}
460x85	40	8900	9600	7400	7600	6500_{35}	6500_{35}	5700_{75}	5700_{70}	5200_{115}	5100_{115}
	75	8300	8800	7000_{5}	7000_{5}	6100_{40}	6100_{40}	5500_{95}	5400_{95}	4800_{130}	4600_{125}
495x85	40	9300	10100	7700_{5}	8000_{5}	6800_{40}	6800_{40}	6000_{85}	6100_{85}	5500_{125}	5500_{130}
	75	8700	9200	7300_{10}	7400_{10}	6400_{45}	6500_{45}	5800_{100}	5800_{100}	5100_{145}	5000_{145}
525x85	40	9600	10500	8000_{5}	8300_{10}	7000_{45}	7100_{45}	6300_{95}	6400_{95}	5700_{135}	5700_{140}
	75	9000	9600	7600_{10}	7800_{15}	6700_{50}	6700_{50}	6000_{110}	6000_{110}	5400_{160}	5100_{150}
560x85	40	10000	11000	8300_{10}	8700_{15}	7300_{45}	7500_{50}	6600_{100}	6600_{100}	6000_{145}	6000_{145}
	75	9300	10100	7800_{15}	8100_{15}	7000_{55}	7100_{60}	6300_{120}	6400_{120}	5800_{175}	5700_{170}
590x85	40	10400	11400	8500_{10}	9100_{15}	7600_{50}	7800_{55}	6900_{110}	6900_{110}	6200_{155}	6300_{155}
	75	9600	10500	8100_{15}	8500_{20}	7200_{60}	7300_{65}	6600_{125}	6600_{125}	6000_{185}	6000_{185}

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 GL 17 in this table are stocked in each state. Please check with your supplier before ordering

Single span Verandah beam
AS 4055 Classification C1, C2 & C3



VERANDAH BEAM

EXAMPLE:

wind speed = C3
sheet roof - 40 kg/m^2
roof load width = 3900 mm
rafter/truss spacing = 600 mm
verandah span = 3500 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 GL 17C - 260 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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum verandah span (mm)									
		Single span									
130x65	40	2700	2800	1900	1800	1500	1100	1300	NS	NS	NS
	75	2400	2400	1700	1600	1400	1000	1100	NS	NS	NS
165x65	40	3500	3500	2400	2500	1900	1800	1600	1200	1400_{5}	NS
	75	3100	3100	2200	2200	1800	1600	1500	NS	1300_{10}	NS
195x65	40	4200	4200	2900	2900	2300	2300	1900	1600_{10}	1600_{10}	NS
	75	3700	3600	2600	2700	2100	2100	1800	1500_{15}	1600_{15}	NS
230x65	40	4800	4800	3500	3500	2800_{5}	2700_{10}	2300_{10}	2200_{15}	2000_{10}	1600_{30}
	75	4300	4300	3200	3100	2500_{5}	2600_{10}	2200_{15}	2100_{15}	1900_{10}	1400_{10}
260x65	40	5400	5400	4000	4000_{5}	3200	3100_{10}	2600_{15}	2600_{25}	2300_{25}	1800_{25}
	75	4800	4800	3600	3600	2900_{10}	2900_{15}	2500_{20}	2400_{30}	2200_{35}	1700_{30}
295x65	40	6100	6000	4500	4400	3600_{15}	3500_{10}	3000_{20}	2900_{35}	2600_{35}	2500_{45}
	75	5400	5400	4100_{5}	4100_{10}	3300_{5}	3300_{15}	2800_{30}	2800_{30}	2500_{40}	2000_{25}
330x65	40	6700	6700	4900_{5}	4900_{10}	4100_{20}	4000_{15}	3400_{15}	3200_{30}	2900_{45}	2800_{45}
	75	6000	5900	4500	4500_{5}	3800_{20}	3700_{15}	3200_{25}	3100_{35}	2800_{40}	2700_{55}
360x65	40	7300	7300	5300_{10}	5300_{15}	4400_{20}	4400_{25}	3700_{35}	3600_{30}	3200_{40}	3100_{55}
	75	6500	6500	4900_{10}	4900_{15}	4100_{20}	4100_{20}	3500_{40}	3400_{35}	3100_{45}	2900_{65}
395x65	40	8000	8000	5800_{5}	5800_{10}	4800_{30}	4700_{35}	4100_{35}	4000_{35}	3500_{35}	3400_{50}
	75	7100	7100	5300_{10}	5300_{15}	4400_{25}	4400_{30}	3900_{40}	3800_{35}	3400_{40}	3200_{60}
425x65	40	8700	8700	6200_{15}	6200_{10}	5100_{30}	5100_{35}	4400_{45}	4300_{55}	3800_{60}	3600_{45}
	75	7600	7600	5700_{10}	5700_{15}	4800_{35}	4700_{30}	4200_{40}	4100_{40}	3700_{65}	3500_{55}
460x65	40	9400	9400	6700_{20}	6700_{25}	5500_{35}	5500_{45}	4700_{55}	4700_{50}	4100_{60}	4000_{50}
	75	8300	8300	6100_{20}	6100_{15}	5100_{35}	5100_{40}	4500_{50}	4400_{60}	3900_{65}	3800_{55}
495x65	40	10200	10200_{5}	7300_{25}	7200_{25}	5900_{35}	5800_{40}	5000_{55}	5000_{65}	4400_{75}	4400_{90}
	75	8900	8900	6600_{20}	6600_{15}	5500_{35}	5400_{40}	4800_{65}	4700_{75}	4200_{65}	4200_{60}

Single span Verandah beam
AS 4055 Classification C1, C2 & 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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Single span									
130x85	40	3000	3000	2100	2100	1600	1400	1400	1000	1200	NS
	75	2600	2700	1900	1900	1500	1300	1300	NS	1100	NS
165x85	40	3900	3900	2700	2700	2100	2100	1800	1600	1500	1100
	75	3400	3300	2400	2500	1900	1900	1600	1500_{5}	1500_{5}	NS
195x85	40	4500	4500	3200	3200	2500	2600	2100	2100	1800	1600_{10}
	75	4000	4000	2900	2900	2300	2300	2000	1900_{5}	1700	1500_{20}
230x85	40	5200	5200	3900	3800	3000	3000	2500_{5}	2600_{15}	2200_{10}	2200_{15}
	75	4600	4600	3500	3400	2800	2800_{5}	2400_{10}	2300_{15}	2100_{5}	2000_{15}
260x85	40	5800	5800	4300	4300	3500	3400	2900_{10}	2900_{15}	2500_{20}	2500_{30}
	75	5200	5200	4000	3900	3200	3200	2700_{10}	2700_{25}	2400_{20}	2300_{35}
295x85	40	6500	6500	4800	4800	4000_{5}	4000_{5}	3400_{5}	3300_{15}	2900_{25}	2900_{35}
	75	5800	5800	4400	4400	3700_{10}	3600_{5}	3100_{10}	3100_{20}	2700_{20}	2800_{35}
330x85	40	7300	7300	5300	5300	4400_{5}	4400_{10}	3800_{20}	3700_{15}	3300_{20}	3200_{30}
	75	6500	6500	4900	4900_{5}	4100_{10}	4100_{20}	3500_{25}	3500_{20}	3100_{25}	3100_{40}
360x85	40	7900	7900	5800	5800	4800_{15}	4700_{10}	4100_{20}	4100_{20}	3600_{40}	3500_{30}
	75	7000	7000	5300	5300_{5}	4400_{10}	4400_{15}	3900_{25}	3800_{20}	3400_{20}	3300_{35}
395x85	40	8700	8700	6300_{5}	6300	5200_{15}	5200_{20}	4500_{25}	4400_{30}	4000_{40}	3900_{35}
	75	7700	7700	5800	5700_{5}	4800_{20}	4800_{25}	4200_{30}	4200_{40}	3800_{45}	3700_{35}
425x85	40	9400	9400	6800_{5}	6800_{10}	5500_{20}	5500_{25}	4800_{35}	4700_{45}	4200_{50}	4200_{35}
	75	8300	8300	6200_{5}	6200_{5}	5100_{20}	5100_{25}	4500_{30}	4500_{40}	4000_{45}	4000_{40}
460x85	40	10300	10200	7300_{10}	7300_{15}	6000_{25}	5900_{20}	5100_{35}	5100_{45}	4600_{45}	4500_{55}
	75	9000	9000	6700_{10}	6700_{15}	5500_{25}	5500_{30}	4800_{40}	4800_{50}	4300_{55}	4300_{65}
495x85	40	11100	11100	7900_{10}	7900_{15}	6400_{25}	6400_{20}	5500_{35}	5500_{45}	4900_{60}	4800_{70}
	75	9800	9700	7200_{15}	7200_{20}	5900_{30}	5900_{30}	5200_{40}	5100_{50}	4600_{50}	4600_{65}
525x85	40	11900	11800	8400_{15}	8400_{15}	6800_{30}	6800_{40}	5800_{45}	5800_{50}	5100_{60}	5100_{70}
	75	10400	10400	7600_{15}	7600_{20}	6300_{30}	6200_{25}	5400_{40}	5400_{50}	4900_{65}	4800_{75}
560x85	40	12000	12000	9000_{15}	9000_{15}	7200_{35}	7200_{40}	6200_{50}	6100_{45}	5400_{60}	5400_{70}
	75	11200	11100	8100_{20}	8100_{25}	6700_{30}	6700_{25}	5800_{50}	5800_{60}	5200_{65}	5200_{75}
590x85	40	12000	12000	9500_{25}	9500_{25}	7600_{40}	7600_{40}	6500_{50}	6500_{45}	5700_{70}	5700_{85}
	75	11900	11800_{5}	8600_{20}	8600_{20}	7000_{35}	7000_{45}	6100_{60}	6100_{55}	5400_{65}	5400_{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. Restraint value for slenderness calculations is 1200 mm
4. Not all sizes of SmartLam GL 17 in this table are stocked in each state. Please check with your supplier before ordering

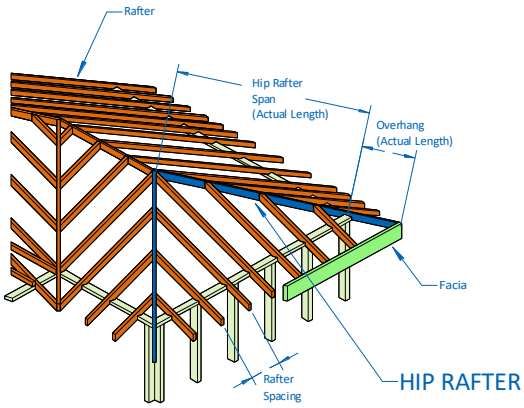
Continuous span Verandah beam
AS 4055 Classification C1, C2 & C3

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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Continuous span									
130x65	40	3000	3000	2000	2000	1500	1500	1300	NS	NS	NS
	75	2900	2900	1900	1900	1500	1300	1300	NS	NS	NS
165x65	40	3800	3800	2600	2700	2000	2000	1600	1300	1400	NS
	75	3700	3600	2500	2600	1900	1600	1600	1200	1000	NS
195x65	40	4500	4500	3100	3100	2400	2400_{5}	1800	1600	1500_{5}	1000
	75	4300	4300	2900	2900	2300	2100	1700	1400	1500_{10}	NS
230x65	40	5300	5300	3600	3600	2800_{5}	2800_{5}	2300_{15}	1800	1800_{25}	1800_{25}
	75	5000	5000	3500	3400	2700_{5}	2800_{10}	2200_{20}	1800_{5}	1800_{35}	1800_{30}
260x65	40	6000	6000	4100	4100	3200_{15}	3100_{10}	2600_{25}	2700_{35}	1900_{30}	1900_{30}
	75	5400	5400	3900	3900	3100_{15}	3100_{15}	2500_{35}	2600_{40}	1900_{35}	1900_{40}
295x65	40	6500	6500	4700_{5}	4600_{5}	3700_{25}	3600_{25}	3000_{45}	3000_{45}	2400_{60}	2000_{35}
	75	6000	6000	4500_{10}	4400_{10}	3500_{30}	3300_{25}	2900_{50}	2900_{50}	2100_{50}	2000_{45}
330x65	40	7000	7100	5200_{15}	5200_{15}	4100_{35}	4100_{40}	3400_{60}	3300_{55}	2700_{85}	2800_{90}
	75	6500	6500	5000_{20}	5000_{15}	3900_{40}	3900_{40}	3300_{75}	3200_{65}	2500_{80}	2100_{50}
360x65	40	7400	7600	5700_{20}	5700_{20}	4500_{50}	4500_{50}	3700_{85}	3400_{65}	3200_{110}	2900_{100}
	75	6800	6900	5400_{25}	5400_{25}	4300_{55}	4300_{55}	3500_{90}	3300_{75}	2800_{105}	2800_{105}
395x65	40	7800	8100	6300_{30}	6200_{30}	4900_{65}	4900_{65}	4100_{100}	3600_{80}	3300_{120}	3100_{105}
	75	7200	7400	5900_{35}	5900_{35}	4700_{75}	4700_{75}	3900_{110}	3400_{85}	3200_{130}	3000_{115}
425x65	40	8100	8600	6700_{40}	6700_{40}	5300_{85}	5300_{85}	4400_{115}	4400_{115}	3600_{135}	3600_{140}
	75	7500	7800	6200_{40}	6200_{40}	5100_{90}	5100_{90}	4200_{120}	3700_{100}	3300_{135}	3100_{120}
460x65	40	8500	9000	7000_{45}	7100_{45}	5700_{95}	5700_{95}	4800_{130}	4600_{120}	3800_{140}	3500_{125}
	75	7900	8300	6600_{50}	6600_{50}	5500_{105}	5500_{105}	4600_{135}	4500_{135}	3700_{160}	3700_{160}
495x65	40	8900	9500	7300_{50}	7500_{55}	6200_{110}	6100_{110}	5100_{145}	5000_{140}	4400_{175}	3800_{145}
	75	8200	8700	6900_{55}	7000_{55}	5900_{115}	5800_{120}	5000_{155}	4900_{150}	3900_{165}	3800_{165}
130x85	40	3400	3400	2300	2400	1800	1700	1500	1300	1300	NS
	75	3300	3200	2200	2200	1700	1500	1400	1200	1300	NS
165x85	40	4400	4400	3000	3000	2300	2300	1900	1600	1600	1300
	75	4100	4100	2800	2800	2200	2100	1800	1600	1500	1200
195x85	40	5100	5200	3500	3400	2800	2800	2300	2100	1700	1500
	75	4700	4700	3400	3300	2600	2700	2200	1900_{5}	1700	1400_{5}
230x85	40	5800	5800	4200	4100	3300	3200	2700_{5}	2700_{10}	2300_{15}	1800
	75	5300	5300	4000	4000	3100	3100	2600_{10}	2700_{15}	2200_{20}	1800_{10}
260x85	40	6300	6300	4700	4600	3700	3600	3100_{20}	3100_{20}	2500_{30}	2700_{35}
	75	5800	5800	4500	4500	3500_{5}	3500_{5}	2900_{20}	2900_{20}	2500_{35}	2600_{40}
295x85	40	6900	6900	5300	5300	4200_{15}	4200_{15}	3500_{30}	3300_{25}	3000_{45}	3000_{45}
	75	6300	6300	5100	5100	4000_{15}	4000_{15}	3400_{35}	3200_{30}	2900_{50}	2900_{55}
330x85	40	7300	7500	5900	5900	4700_{25}	4600_{20}	3900_{45}	3900_{40}	3300_{65}	3200_{60}
	75	6800	6900	5500_{5}	5500_{5}	4500_{30}	4500_{30}	3800_{50}	3500_{40}	3300_{80}	3100_{70}
360x85	40	7700	8000	6300_{5}	6300_{5}	5100_{30}	5100_{30}	4300_{55}	4300_{55}	3700_{90}	3400_{70}
	75	7200	7300	5900_{10}	5900_{10}	4900_{40}	4900_{40}	4100_{60}	4100_{65}	3400_{90}	3300_{80}
395x85	40	8100	8600	6700_{10}	6700_{10}	5600_{45}	5600_{45}	4700_{75}	4600_{75}	4000_{105}	3500_{85}
	75	7600	7800	6300_{15}	6300_{15}	5400_{50}	5400_{50}	4500_{85}	4500_{85}	3900_{110}	3400_{90}
425x85	40	8500	9000	7000_{15}	7100_{20}	6100_{55}	6000_{50}	5000_{90}	5000_{90}	4400_{115}	4400_{120}
	75	7900	8300	6600_{20}	6600_{20}	5700_{60}	5800_{60}	4900_{100}	4800_{95}	4200_{125}	3600_{100}
460x85	40	8900	9600	7400_{20}	7600_{25}	6500_{70}	6500_{70}	5400_{105}	5400_{105}	4700_{130}	4600_{125}
	75	8300	8800	7000_{25}	7000_{25}	6100_{75}	6100_{75}	5200_{110}	5200_{110}	4500_{135}	4500_{135}
495x85	40	9300	10100	7700_{25}	8000_{30}	6800_{80}	6800_{85}	5900_{120}	5800_{115}	5100_{145}	5000_{145}
	75	8700	9200	7300_{30}	7400_{30}	6400_{90}	6500_{90}	5600_{125}	5600_{125}	4900_{155}	4800_{155}
525x85	40	9600	10500	8000_{30}	8300_{35}	7000_{90}	7100_{90}	6200_{130}	6200_{130}	5400_{160}	5100_{150}
	75	9000	9600	7600_{35}	7800_{35}	6700_{95}	6700_{95}	6000_{135}	5900_{135}	5200_{170}	5100_{165}
560x85	40	10000	11000	8300_{35}	8700_{40}	7300_{95}	7500_{100}	6600_{140}	6600_{140}	5700_{175}	5700_{175}
	75	9300	10100	7800_{40}	8100_{40}	7000_{100}	7100_{105}	6300_{150}	6300_{150}	5500_{185}	5200_{170}
590x85	40	10400	11400	8500_{35}	9100_{45}	7600_{100}	7800_{105}	6900_{150}	6900_{150}	6100_{190}	6000_{185}
	75	9600	10500	8100_{40}	8500_{50}	7200_{105}	7300_{110}	6600_{160}	6600_{160}	5800_{195}	5700_{195}

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 GL 17 in this table are stocked in each state. Please check with your supplier before ordering

Hip rafter - sheet and tile roof
AS 4055 Classification N1, N2, N3, N4, 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:

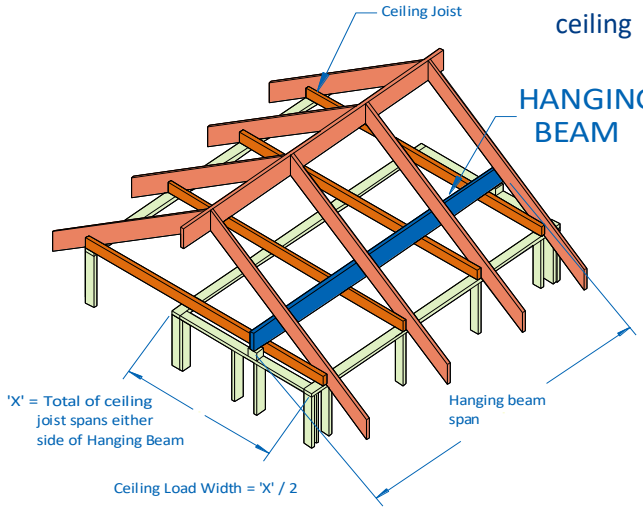
SmartLam GL 17C — 230 x 65

Wind speed		N1, N2, N3 & N4				C1, C2 & C3			
Rafter spacing (mm)		600		1200		600		1200	
Member size (GL17C) DxB (mm)	Roof & ceiling mass (kg/m^2)	Maximum recommended rafter span + overhang span (mm)							
		Span	Overhang	Span	Overhang	Span	Overhang	Span	Overhang
130x65	40	3800	750	3800	750	3300	650	3300	650
	75	3250	650	3250	650	3250	650	3250	650
165x65	40	4550	900	4550	900	3900	775	3900	775
	75	3900	775	3900	775	3900	775	3900	775
195x65	40	5200	1000	5200	1000	4350	850	4350	850
	75	4450	850	4450	850	4450	850	4450	850
230x65	40	5950	1150	5950	1150	4850	950	4850	950
	75	5050	1000	5050	1000	4950	950	4950	950
260x65	40	6450	1250	6450	1250	5250	1050	5250	1050
	75	5600	1100	5600	1100	5350	1050	5350	1050
295x65	40	7050	1400	7050	1400	5700	1100	5700	1100
	75	6150	1225	6150	1225	5850	1150	5850	1150
330x65	40	7600	1500	7600	1500	6150	1225	6150	1225
	75	6650	1325	6650	1325	6300	1250	6300	1250
360x65	40	8100	1600	8100	1600	6550	1300	6550	1300
	75	7050	1400	7050	1400	6650	1325	6650	1325
395x65	40	8650	1725	8650	1725	6950	1350	6950	1350
	75	7500	1500	7500	1500	7100	1400	7100	1400
425x65	40	9100	1800	9100	1800	7300	1450	7300	1450
	75	7900	1575	7900	1575	7450	1450	7450	1450
130x85	40	4050	800	4050	800	3600	700	3600	700
	75	3450	650	3450	650	3450	650	3450	650
165x85	40	4850	950	4850	950	4250	850	4250	850
	75	4150	825	4150	825	4150	825	4150	825
195x85	40	5550	1100	5550	1100	4750	950	4750	950
	75	4750	950	4750	950	4750	950	4750	950
230x85	40	6300	1250	6300	1250	5300	1050	5300	1050
	75	5400	1075	5400	1075	5400	1075	5400	1075
260x85	40	6850	1350	6850	1350	5750	1150	5750	1150
	75	6000	1200	6000	1200	5850	1150	5850	1150
295x85	40	7450	1450	7450	1450	6250	1250	6250	1250
	75	6500	1300	6500	1300	6350	1250	6350	1250
330x85	40	8050	1600	8050	1600	6750	1350	6750	1350
	75	7050	1400	7050	1400	6850	1350	6850	1350
360x85	40	8600	1700	8600	1700	7150	1425	7150	1425
	75	7450	1450	7450	1450	7250	1450	7250	1450
395x85	40	9150	1825	9150	1825	7600	1500	7600	1500
	75	7950	1550	7950	1550	7750	1550	7750	1550
425x85	40	9700	1900	9700	1900	8000	1600	8000	1600
	75	8400	1675	8400	1675	8100	1600	8100	1600

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 190 x 1 9 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 GL 17 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, N3 & N4



ceiling mass - 20 kg/m^2

EXAMPLE:

Wind speed = N3
X = 5000 mm
Ceiling load width = X/2 = 5000/2 = 2500 mm
Hanging beam span = 4200 mm

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

ADOPT:

SmartLam GL 17C - 195 x 65

Ceiling load width (mm)	1800	2400	300	3600	4200	4800
Member size (GL17C) DxB (mm)	Maximum recommended Hanging beam span (mm)					
130x65	4050	3650	3350	3100	2900	2750
165x65	5050	4650	4300	3950	3700	3500
195x65	5800	5350	4950	4700	4450	4150
230x65	6700	6150	5700	5400	5100	4850
260x65	7500	6850	6350	6000	5650	5400
295x65	8400	7650	7100	6700	6300	6000
330x65	9350	8500	7900	7400	7000	6650
360x65	10150	9250	8550	8000	7600	7200
395x65	11150	10150	9350	8750	8250	7850
425x65	12000	10900	10100	9400	8900	8450
460x65	12000	11850	10900	10200	9600	9100
495x65	12000	12000	11800	11000	10350	9800
130x85	4450	4000	3650	3400	3150	3000
165x85	5400	4950	4650	4350	4050	3850
195x85	6200	5700	5350	5000	4750	4550
230x85	7200	6600	6150	5800	5500	5250
260x85	8000	7350	6850	6450	6100	5800
295x85	9000	8250	7650	7200	6800	6500
330x85	10000	9150	8500	8000	7550	7200
360x85	10900	9950	9250	8650	8200	7800
395x85	11950	10900	10100	9500	8950	8500
425x85	12000	11750	10900	10200	9600	9150
460x85	12000	12000	11800	11050	10400	9900
495x85	12000	12000	12000	11950	11250	10650
525x85	12000	12000	12000	12000	11950	11300
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 GL 17 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 & C3

Ceiling mass - 20 kg/m^2

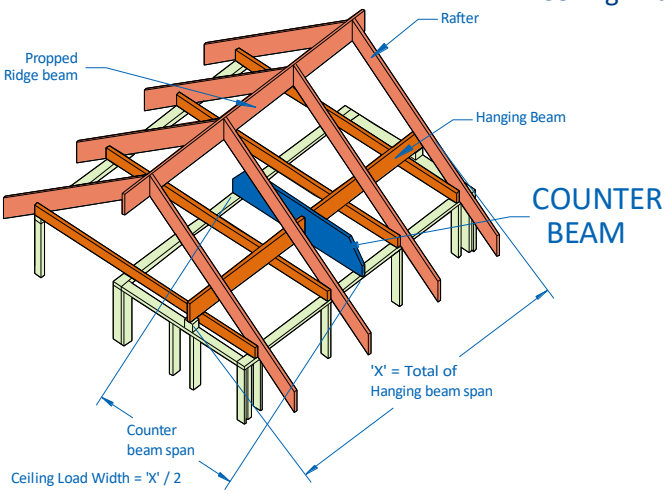
Ceiling load width (mm)	1800	2400	300	3600	4200	4800
Member size (GL17C) DxB (mm)	Maximum recommended Hanging beam span (mm)					
130x65	3450	2950	2650	2400	2250	2100
165x65	4350	3750	3350	3050	2850	2650
195x65	5150	4450	4000	3600	3350	3100
230x65	6050	5250	4700	4250	3950	3700
260x65	6850	5900	5300	4800	4450	4150
295x65	7750	6700	6000	5450	5050	4700
330x65	8650	7500	6700	6100	5650	5300
360x65	9400	8150	7300	6650	6150	5750
395x65	10300	8950	8000	7300	6750	6300
425x65	11100	9650	8600	7850	7250	6800
460x65	12000	10400	9300	8500	7850	7350
495x65	12000	11200	10000	9150	8450	7900
130x85	3900	3400	3050	2750	2550	2400
165x85	4950	4300	3850	3500	3250	3000
195x85	5850	5100	4550	4150	3800	3550
230x85	6900	6000	5350	4900	4500	4200
260x85	7800	6750	6050	5500	5100	4750
295x85	8800	7650	6850	6250	5750	5400
330x85	9850	8550	7650	6950	6450	6000
360x85	10700	9300	8350	7600	7050	6550
395x85	11750	10200	9150	8350	7700	7200
425x85	12000	10950	9800	8950	8300	7750
460x85	12000	11850	10600	9700	8950	8350
495x85	12000	12000	11400	10400	9650	9000
525x85	12000	12000	12000	11050	10200	9550
560x85	12000	12000	12000	11750	10900	10150
590x85	12000	12000	12000	12000	11450	10700

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 GL 17 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, N3 & N4

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 GL 17C - 165 x 65

Ceiling load width (mm)	600	1800	2400	3000	3600	4200	4800	5400	6600
Member size (GL17C) DxB (mm)	Maximum recommended Counter beam span (mm)								
130x65	4700	4600	4200	3900	3700	3500	3350	3200	3000
165x65	5950	5550	5200	4900	4700	4500	4300	4150	3850
195x65	7000	6400	5950	5650	5400	5150	5000	4850	4600
230x65	8250	7400	6900	6500	6200	5950	5750	5550	5250
260x65	9350	8250	7700	7250	6900	6600	6400	6200	5850
295x65	10600	9300	8600	8150	7750	7400	7150	6900	6550
330x65	11850	10350	9600	9050	8600	8250	7950	7650	7250
360x65	12000	11250	10450	9800	9350	8950	8600	8300	7850
395x65	12000	12000	11450	10750	10250	9800	9400	9100	8600
425x65	12000	12000	12000	11600	11000	10550	10100	9800	9200
460x65	12000	12000	12000	12000	11950	11400	10950	10600	9950
495x65	10500	12000	12000	12000	12000	12000	11850	11400	10750
130x85	5100	4900	4550	4250	4050	3850	3650	3550	3300
165x85	6500	5950	5550	5250	5000	4800	4650	4500	4250
195x85	7650	6850	6400	6050	5750	5550	5350	5200	4900
230x85	9050	7900	7350	6950	6650	6400	6150	5950	5650
260x85	10200	8800	8200	7750	7400	7100	6850	6650	6300
295x85	11600	9900	9250	8750	8300	8000	7700	7450	7050
330x85	12000	11050	10300	9700	9250	8850	8550	8250	7800
360x85	12000	12000	11200	10550	10050	9650	9300	9000	8500
395x85	12000	12000	12000	11600	11000	10550	10150	9850	9300
425x85	12000	12000	12000	12000	11850	11350	10950	10600	9950
460x85	11350	12000	12000	12000	12000	12000	11850	11450	10800
495x85	10100	12000	12000	12000	12000	12000	12000	12000	11650
525x85	9750	12000	12000	12000	12000	12000	12000	12000	12000
560x85	9450	10950	12000	12000	12000	12000	12000	12000	12000
590x85	9300	10150	11350	12000	12000	12000	12000	12000	12000

Counter beam supporting Hanging beam
AS 4055 Classification C1, C2 and C3

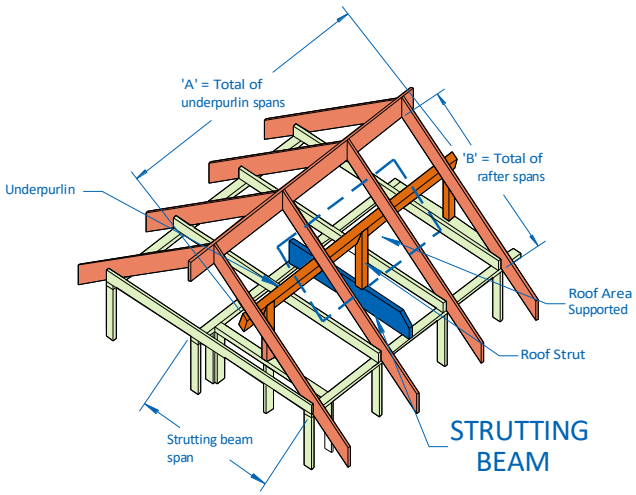
Ceiling mass - 20 kg/m^2

Ceiling load width (mm)	600	1800	2400	3000	3600	4200	4800	5400	6600
Member size (GL17C) DxB (mm)	Maximum recommended Counter beam span (mm)								
130x65	4700	3450	3000	2700	2450	2300	2150	2000	1800
165x65	5950	4400	3800	3400	3100	2900	2700	2550	2300
195x65	7000	5200	4500	4050	3700	3400	3200	3000	2750
230x65	8250	6100	5300	4750	4350	4000	3750	3550	3200
260x65	9350	6900	6000	5350	4900	4550	4250	4000	3650
295x65	10600	7800	6800	6100	5550	5150	4800	4550	4100
330x65	11850	8700	7600	6800	6200	5750	5400	5100	4600
360x65	12000	9500	8250	7400	6750	6300	5900	5550	5000
395x65	12000	10400	9050	8100	7450	6900	6450	6100	5500
425x65	12000	11200	9750	8750	8000	7400	6950	6550	5900
460x65	12000	12000	10500	9450	8650	8000	7500	7100	6400
495x65	10500	12000	11300	10150	9300	8600	8050	7600	6900
130x85	5100	3950	3450	3100	2800	2600	2450	2300	2100
165x85	6500	5000	4350	3900	3550	3300	3100	2900	2650
195x85	7650	5900	5150	4600	4200	3900	3650	3450	3100
230x85	9050	6950	6050	5400	4950	4600	4300	4050	3650
260x85	10200	7850	6850	6100	5600	5200	4850	4600	4150
295x85	11600	8900	7750	6950	6350	5900	5500	5200	4700
330x85	12000	9900	8650	7750	7100	6550	6150	5800	5250
360x85	12000	10800	9400	8450	7750	7150	6700	6350	5750
395x85	12000	11850	10300	9250	8450	7850	7350	6950	6300
425x85	12000	12000	11100	9950	9100	8450	7900	7450	6750
460x85	11300	12000	11950	10750	9850	9150	8550	8050	7300
495x85	10100	12000	12000	11550	10600	9800	9200	8700	7850
525x85	9750	12000	12000	12000	11200	10400	9750	9200	8350
560x85	9450	10950	12000	12000	11950	11100	10400	9800	8900
590x85	9300	10150	11350	12000	12000	11650	10950	10350	9350

NOTES:

1. D = member depth, B = member breadth, NS = not suitable
3. The above table was based on a maximum ceiling mass of 20 kg/m^2
4. Minimum bearing length = 70 mm at end supports
1. Not all sizes of SmartLam GL 17 in this table are stocked in each state. Please check with your supplier before ordering

Strutting beam supporting underpurlins
AS 4055 Classification N1, N2, N3 & N4



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 GL 17C- 195 x 65

Roof area supported (m^2)		2	4	6	8	10	12
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting beam span (mm)					
130x65	20	5050	3600	2350	1800	1400	1200
	60	3600	2550	2050	1550	1250	1050
165x65	20	6500	5250	3850	2850	2300	1900
	60	5000	3700	3000	2500	2000	1650
195x65	20	7750	6350	5400	4000	3200	2650
	60	6000	4700	3900	3350	2750	2300
230x65	20	9300	7650	6700	5600	4500	3700
	60	7300	5700	4900	4400	3850	3200
260x65	20	10600	8850	7750	7000	5750	4750
	60	8450	6600	5650	5100	4700	4100
295x65	20	12000	10300	9050	8200	7450	6150
	60	9850	7700	6600	5900	5450	5050
330x65	20	12000	11800	10450	9450	8700	7750
	60	11300	8900	7600	6800	6200	5800
360x65	20	12000	12000	11700	10600	9750	9100
	60	12000	10000	8550	7600	6950	6450
395x65	20	12000	12000	12000	12000	11050	10300
	60	12000	11350	9700	8600	7850	7250
425x65	20	10400	10950	12000	12000	12000	11450
	60	11200	12000	10750	9550	8650	8000
460x65	20	9850	10150	10500	10900	11500	12000
	60	10250	11300	12000	10700	9700	8950
130x85	20	5450	4400	3100	2350	1850	1550
	60	4100	2900	2350	2000	1600	1350
165x85	20	7000	5750	5000	3750	3000	2500
	60	5450	4250	3450	2950	2600	2150
195x85	20	8300	6900	6050	5300	4200	3500
	60	6550	5200	4500	3850	3450	3000
230x85	20	9850	8300	7300	6650	5900	4900
	60	7950	6300	5400	4900	4500	4100
260x85	20	11200	9550	8450	7700	7100	6300
	60	9150	7300	6300	5650	5200	4850
295x85	20	12000	11100	9900	9000	8300	7750
	60	10650	8500	7350	6550	6000	5600
330x85	20	12000	12000	11350	10350	9600	9000
	60	12000	9850	8450	7550	6900	6450
360x85	20	12000	12000	12000	11600	10750	10100
	60	12000	11050	9500	8500	7750	7200
395x85	20	11500	12000	12000	12000	12000	11450
	60	12000	12000	10800	9600	8800	8150
425x85	20	10300	10700	11200	12000	12000	12000
	60	10850	12000	11950	10650	9700	9000
460x85	20	9800	10000	10250	10500	10850	11250
	60	10100	10700	11750	11950	10900	10050

Strutting beam supporting underpurlins
AS 4055 Classification C1, C2 & C3

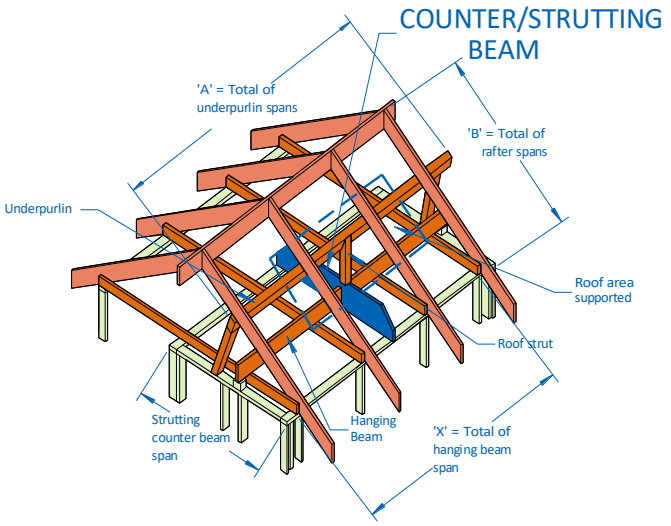
Roof area supported (m^2)		2	4	6	8	10	12
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting beam span (mm)					
130x65	20	3150	1550	1050	NS	NS	NS
	60	3400	1700	1150	NS	NS	NS
165x65	20	5100	2500	1700	1250	NS	NS
	60	5000	2750	1850	1350	NS	NS
195x65	20	7200	3550	2350	1750	1200	NS
	60	6000	3850	2550	1900	1550	NS
230x65	20	9300	4950	3250	2450	1950	1350
	60	7300	5400	3550	2650	2150	1750
260x65	20	10600	6350	4200	3150	2500	2100
	60	8450	6600	4550	3400	2700	2250
295x65	20	12000	8200	5400	4050	3200	2700
	60	9850	7700	5900	4400	3500	2900
330x65	20	12000	10400	6800	5050	4050	3350
	60	11300	8900	7400	5500	4400	3650
360x65	20	12000	12000	8100	6050	4800	4000
	60	12000	10000	8550	6600	5250	4350
395x65	20	12000	12000	9850	7300	5800	4850
	60	12000	11350	9700	7950	6350	5250
425x65	20	10400	10950	11450	8500	6750	5600
	60	11200	12000	10750	9150	7350	6100
460x65	20	9850	10150	10500	9950	7900	6550
	60	10250	11300	12000	10650	8600	7150
130x85	20	4150	2050	1350	1000	NS	NS
	60	4100	2250	1500	1100	NS	NS
165x85	20	6750	3300	2200	1650	1300	NS
	60	5450	3600	2400	1800	1450	1000
195x85	20	8300	4650	3050	2300	1850	1550
	60	6550	5050	3350	2500	2000	1650
230x85	20	9850	6500	4300	3200	2550	2150
	60	7950	6300	4650	3500	2800	2300
260x85	20	11200	8400	5500	4100	3300	2750
	60	9150	7300	6000	4450	3550	2950
295x85	20	12000	10900	7100	5300	4250	3500
	60	10650	8500	7350	5800	4600	3850
330x85	20	12000	12000	8950	6650	5300	4400
	60	12000	9850	8450	7250	5800	4800
360x85	20	12000	12000	10750	7950	6300	5250
	60	12000	11050	9500	8500	6900	5700
395x85	20	11500	12000	12000	9650	7650	6350
	60	12000	12000	10800	9600	8300	6900
425x85	20	10300	10700	11200	11200	8900	7350
	60	10800	12000	11950	10650	9550	8000
460x85	20	9800	10000	10250	10500	10450	8650
	60	10100	10700	11750	11950	10900	9350

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 GL 17 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, N3 & N4

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 GL 17C - 260 x 65

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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Counter beam span (mm)											
130x65	40	3350	2700	2200	1700	1350	1150	2950	2500	2150	1650	1350	1150
	75	2850	2150	1800	1400	1150	NS	2600	2050	1750	1400	1100	NS
165x65	40	4300	3700	3250	2700	2150	1850	3850	3400	3000	2600	2150	1800
	75	3850	3100	2600	2250	1800	1500	3550	2900	2500	2200	1800	1500
195x65	40	5050	4400	3950	3650	3000	2550	4500	4050	3750	3450	2900	2500
	75	4550	3850	3300	2900	2500	2100	4150	3650	3150	2800	2450	2100
230x65	40	5900	5200	4750	4350	4100	3500	5200	4750	4400	4150	3900	3400
	75	5400	4600	4050	3700	3400	2900	4900	4300	3900	3600	3250	2850
260x65	40	6700	5950	5400	5000	4700	4400	5850	5400	5000	4700	4450	4250
	75	6150	5250	4650	4250	3950	3700	5500	4900	4450	4100	3850	3600
295x65	40	7650	6850	6250	5750	5400	5100	6650	6150	5700	5400	5100	4850
	75	7050	6050	5350	4900	4550	4250	6300	5600	5100	4700	4400	4150
330x65	40	8600	7750	7100	6550	6150	5800	7400	6900	6450	6100	5800	5500
	75	8000	6850	6100	5600	5200	4850	7050	6300	5750	5350	5000	4700
360x65	40	9450	8550	7850	7300	6850	6450	8100	7550	7100	6700	6400	6100
	75	8800	7600	6800	6200	5750	5400	7700	6950	6350	5900	5500	5200
395x65	40	10450	9550	8800	8150	7650	7250	8950	8350	7900	7450	7100	6800
	75	9800	8500	7600	6950	6450	6050	8500	7700	7050	6550	6150	5800
425x65	40	11350	10400	9600	8950	8400	7950	9650	9050	8550	8100	7750	7400
	75	10650	9350	8350	7650	7050	6600	9250	8400	7700	7150	6700	6350
460x65	40	12000	11450	10600	9900	9300	8800	10500	9900	9400	8900	8500	8150
	75	11700	10300	9250	8450	7850	7350	10100	9200	8450	7900	7400	7000
495x65	40	12000	12000	11650	10900	10300	9750	11400	10800	10250	9750	9300	8950
	75	12000	11350	10200	9350	8650	8100	10950	10050	9300	8650	8150	7700

Strutting/counter beam supporting underpurlins & hanging beam AS 4055 Classification N1, N2, N3 & N4 [Cont'd]

Ceiling mass - 20 kg/m^2

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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Counter beam span (mm)											
130x85	40	3700	3050	2600	2200	1750	1500	3250	2800	2450	2150	1750	1450
	75	3200	2450	2050	1800	1500	1250	2900	2350	2000	1750	1450	1250
165x85	40	4650	4050	3650	3300	2800	2350	4150	3750	3400	3100	2750	2300
	75	4200	3500	2950	2600	2300	2000	3850	3250	2800	2500	2250	1950
195x85	40	5450	4800	4350	4000	3750	3300	4850	4400	4100	3800	3600	3200
	75	4950	4200	3750	3350	3000	2750	4550	3950	3600	3200	2900	2700
230x85	40	6400	5700	5200	4800	4500	4250	5650	5200	4850	4550	4300	4100
	75	5900	5000	4450	4100	3800	3550	5300	4700	4250	3950	3700	3450
260x85	40	7250	6500	5950	5500	5150	4850	6350	5850	5500	5150	4900	4650
	75	6700	5750	5100	4700	4350	4100	6000	5350	4850	4500	4200	4000
295x85	40	8300	7450	6850	6350	5950	5650	7200	6700	6250	5900	5600	5350
	75	7700	6650	5900	5400	5050	4700	6850	6100	5600	5200	4850	4600
330x85	40	9300	8450	7800	7250	6800	6450	8050	7500	7050	6700	6350	6100
	75	8700	7550	6750	6200	5750	5400	7650	6900	6350	5900	5500	5200
360x85	40	10250	9350	8650	8050	7550	7150	8800	8250	7800	7400	7050	6700
	75	9600	8400	7550	6900	6400	6000	8400	7600	7000	6500	6100	5750
395x85	40	11350	10450	9650	9050	8500	8050	9700	9150	8650	8200	7850	7500
	75	10700	9400	8450	7750	7200	6750	9300	8450	7800	7250	6800	6450
425x85	40	12000	11350	10600	9900	9350	8850	10500	9900	9400	8950	8550	8200
	75	11650	10300	9300	8500	7900	7400	10100	9200	8500	7950	7450	7050
460x85	40	12000	12000	11700	11000	10350	9850	11400	10850	10300	9850	9400	9050
	75	12000	11400	10300	9450	8800	8200	11000	10100	9400	8750	8250	7800
495x85	40	12000	12000	12000	12000	11450	10850	12000	11800	11250	10750	10300	9900
	75	12000	12000	11350	10450	9700	9100	11950	11050	10300	9600	9050	8600

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 GL 17 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 & C3

Ceiling mass - 20 kg/m^2

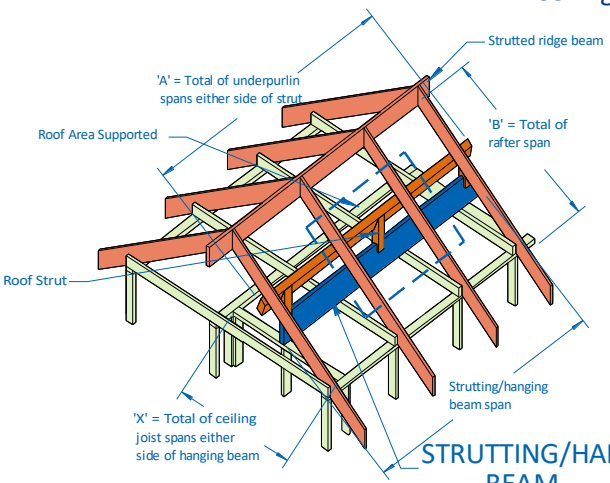
Effective beam spacing (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Counter beam span (mm)											
130x65	40	3350	1650	1100	NS	NS	NS	2950	1700	1100	NS	NS	NS
	75	2850	1650	1100	NS	NS	NS	2600	1600	1100	NS	NS	NS
165x65	40	4300	2700	1750	1300	1050	NS	3850	2750	1800	1350	1050	NS
	75	3850	2600	1750	1350	1050	NS	3550	2500	1750	1350	1050	NS
195x65	40	5050	3850	2500	1850	1450	NS	4500	3750	2550	1850	1500	NS
	75	4550	3550	2450	1850	1500	1250	4150	3450	2400	1850	1500	1250
230x65	40	5900	5200	3500	2600	2050	1700	5200	4750	3600	2600	2050	1700
	75	5400	4600	3400	2600	2100	1750	4900	4300	3300	2550	2050	1700
260x65	40	6700	5950	4500	3300	2650	2200	5850	5400	4500	3400	2650	2200
	75	6150	5250	4250	3250	2650	2200	5500	4900	4150	3200	2600	2200
295x65	40	7650	6850	5900	4300	3400	2800	6650	6150	5650	4400	3450	2850
	75	7050	6050	5350	4150	3400	2850	6300	5600	5100	4050	3300	2800
330x65	40	8600	7750	7100	5450	4300	3550	7400	6900	6450	5500	4350	3600
	75	8000	6850	6100	5150	4200	3550	7050	6300	5750	5000	4100	3500
360x65	40	9450	8550	7850	6500	5150	4250	8100	7550	7100	6400	5250	4300
	75	8800	7600	6800	6100	4950	4200	7700	6950	6350	5900	4850	4100
395x65	40	10450	9550	8800	7950	6200	5100	8950	8350	7900	7450	6300	5200
	75	9800	8500	7600	6950	5950	5000	8500	7700	7050	6550	5750	4900
425x65	40	11350	10400	9600	8950	7250	5950	9650	9050	8550	8100	7200	6100
	75	10650	9350	8350	7650	6800	5750	9250	8400	7700	7150	6600	5650
460x65	40	12000	11450	10600	9900	8600	7000	10500	9900	9400	8900	8300	7150
	75	11700	10300	9250	8450	7850	6700	10100	9200	8450	7900	7400	6500
495x65	40	12000	12000	11650	10900	9900	8200	11400	10800	10250	9750	9300	8150
	75	12000	11350	10200	9350	8650	7700	10950	10050	9300	8650	8150	7450
130x85	40	3700	2200	1450	1050	NS	NS	3250	2250	1450	1050	NS	NS
	75	3200	2150	1450	1100	NS	NS	2900	2050	1450	1100	NS	NS
165x85	40	4650	3600	2300	1750	1400	1150	4150	3500	2350	1750	1400	1150
	75	4200	3350	2300	1750	1400	1150	3850	3250	2250	1750	1400	1150
195x85	40	5450	4800	3300	2450	1950	1600	4850	4400	3350	2450	1950	1600
	75	4950	4200	3200	2400	1950	1650	4550	3950	3100	2400	1950	1600
230x85	40	6400	5700	4600	3400	2700	2250	5650	5200	4600	3450	2750	2250
	75	5900	5000	4350	3350	2700	2250	5300	4700	4200	3250	2650	2250
260x85	40	7250	6500	5950	4400	3450	2850	6350	5850	5500	4500	3500	2900
	75	6700	5750	5100	4250	3450	2900	6000	5350	4850	4100	3350	2850
295x85	40	8300	7450	6850	5700	4500	3700	7200	6700	6250	5700	4600	3750
	75	7700	6650	5900	5400	4400	3700	6850	6100	5600	5200	4300	3650
330x85	40	9300	8450	7800	7200	5650	4650	8050	7500	7050	6700	5800	4750
	75	8700	7550	6750	6200	5450	4600	7650	6900	6350	5900	5300	4500
360x85	40	10250	9350	8650	8050	6800	5600	8800	8250	7800	7400	6800	5700
	75	9600	8400	7550	6900	6400	5400	8400	7600	7000	6500	6100	5300
395x85	40	11350	10450	9650	9050	8250	6750	9700	9150	8650	8200	7850	6900
	75	10700	9400	8450	7750	7200	6450	9300	8450	7800	7250	6800	6300
425x85	40	12000	11350	10600	9900	9350	7900	10500	9900	9400	8950	8550	7900
	75	11650	10300	9300	8500	7900	7400	10100	9200	8500	7950	7450	7050
460x85	40	12000	12000	11700	11000	10350	9350	11400	10850	10300	9850	9400	9050
	75	12000	11400	10300	9450	8800	8200	11000	10100	9400	8750	8250	7800
495x85	40	12000	12000	12000	12000	11450	10800	12000	11800	11250	10750	10300	9900
	75	12000	12000	11350	10450	9700	9100	11950	11050	10300	9600	9050	8600

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 GL 17 in this table are stocked in each state. Please check with your supplier before ordering

Strutting/hanging beam
AS 4055 classification N1, N2, N3 & N4

Ceiling mass - 20 kg/m^2



STRUTTING/HANGING BEAM

Roof Area Supported = ('A' / 2) x ('B' / 2)
Ceiling Load Width = 'X' / 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 GL 17C - 260 x 65

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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Hanging beam span (mm0											
130x65	40	3150	2600	2200	1700	1350	1150	2600	2300	2050	1650	1350	1100
	75	2700	2100	1750	1400	1150	NS	2400	1950	1700	1350	1100	NS
165x65	40	4050	3600	3150	2650	2150	1800	3500	3100	2800	2550	2100	1800
	75	3700	3000	2550	2250	1800	1500	3200	2700	2350	2100	1750	1500
195x65	40	4750	4250	3850	3600	3000	2500	4100	3800	3500	3250	2850	2450
	75	4400	3750	3250	2850	2500	2100	3850	3400	3000	2700	2450	2050
230x65	40	5600	5000	4600	4250	4000	3450	4750	4400	4150	3950	3750	3300
	75	5200	4450	4000	3650	3350	2900	4500	4050	3750	3450	3150	2800
260x65	40	6350	5700	5250	4900	4600	4350	5300	4950	4700	4450	4250	4050
	75	5900	5100	4550	4200	3900	3700	5050	4600	4250	3950	3700	3500
295x65	40	7200	6550	6000	5600	5300	5000	6000	5600	5300	5050	4850	4650
	75	6700	5850	5250	4800	4500	4250	5750	5200	4800	4500	4250	4050
330x65	40	8100	7400	6850	6350	6000	5700	6650	6300	6000	5700	5450	5250
	75	7600	6650	5950	5500	5100	4800	6400	5850	5450	5100	4800	4550
360x65	40	8900	8150	7550	7050	6650	6300	7300	6900	6550	6250	6000	5750
	75	8350	7350	6600	6050	5650	5300	7000	6450	5950	5600	5300	5050
395x65	40	9850	9050	8400	7900	7450	7050	8000	7600	7250	6900	6650	6400
	75	9300	8200	7400	6800	6350	5950	7700	7100	6600	6200	5900	5600
425x65	40	10700	9900	9200	8650	8150	7750	8650	8200	7850	7500	7200	6950
	75	10100	8950	8100	7450	6950	6500	8350	7700	7200	6750	6400	6100
460x65	40	11700	10850	10150	9550	9000	8550	9400	8950	8600	8250	7900	7650
	75	11100	9900	8950	8250	7700	7200	9100	8450	7900	7400	7050	6700
495x65	40	12000	11900	11150	10500	9950	9450	10200	9750	9350	8950	8650	8350
	75	12000	10850	9900	9100	8450	7950	9850	9200	8600	8100	7700	7350

Strutting/hanging beam
AS 4055 Classification N1, N2, N3 & N4 [Cont'd]

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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Hanging beam span (mm)											
130x85	40	3500	2900	2550	2200	1750	1500	2900	2550	2300	2100	1700	1450
	75	3050	2400	2000	1750	1450	1250	2650	2200	1900	1700	1450	1200
165x85	40	4400	3900	3550	3200	2800	2350	3800	3450	3150	2900	2700	2300
	75	4050	3400	2900	2550	2300	1950	3600	3050	2700	2400	2200	1950
195x85	40	5150	4650	4250	3950	3700	3250	4400	4100	3850	3650	3400	3150
	75	4750	4100	3650	3300	2950	2700	4200	3750	3400	3050	2800	2600
230x85	40	6100	5500	5050	4700	4400	4200	5100	4800	4500	4300	4100	3950
	75	5650	4900	4400	4000	3750	3500	4900	4400	4100	3800	3600	3350
260x85	40	6850	6250	5750	5350	5050	4800	5750	5400	5100	4850	4650	4450
	75	6400	5600	5000	4600	4300	4050	5500	5000	4650	4350	4100	3900
295x85	40	7800	7150	6600	6150	5800	5500	6500	6100	5800	5550	5300	5100
	75	7350	6400	5800	5300	4950	4650	6250	5700	5300	4950	4700	4450
330x85	40	8800	8100	7500	7000	6650	6300	7250	6850	6550	6250	6000	5750
	75	8300	7300	6600	6050	5650	5300	7000	6400	5950	5600	5300	5050
360x85	40	9700	8900	8300	7800	7350	7000	7900	7500	7150	6850	6600	6350
	75	9150	8100	7300	6750	6250	5900	7650	7050	6550	6150	5850	5550
395x85	40	10700	9950	9300	8700	8250	7850	8700	8300	7950	7600	7300	7050
	75	10150	9050	8200	7550	7050	6600	8400	7800	7300	6850	6500	6200
425x85	40	11650	10850	10150	9550	9050	8600	9400	9000	8600	8250	7950	7700
	75	11050	9900	9000	8300	7750	7250	9100	8450	7950	7500	7100	6750
460x85	40	12000	11900	11200	10550	10000	9550	10250	9800	9450	9050	8750	8450
	75	12000	10950	9950	9200	8600	8050	9950	9300	8700	8200	7800	7450
495x85	40	12000	12000	12000	11600	11050	10550	11100	10700	10250	9900	9550	9250
	75	12000	12000	11000	10150	9500	8900	10800	10100	9500	9000	8550	8150
525x85	40	12000	12000	12000	12000	11950	11400	11900	11450	11000	10600	10250	9950
	75	12000	12000	11900	11000	10300	9700	11550	10850	10250	9700	9200	8800
560x85	40	12000	12000	12000	12000	12000	12000	12000	12000	11900	11500	11150	10800
	75	12000	12000	12000	12000	11300	10600	12000	11750	11100	10550	10000	9600
590x85	40	11400	12000	12000	12000	12000	12000	12000	12000	12000	12000	11900	11550
	75	12000	12000	12000	12000	12000	11450	12000	12000	11850	11250	10750	10250

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 GL 17 in this table are stocked in each state. Please check with your supplier before ordering

Strutting/hanging beam
AS 4055 classification C1, C2 & 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 (GL17C) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Hanging beam span (mm0											
130x65	40	3150	1650	1100	NS	NS	NS	2600	1700	1100	NS	NS	NS
	75	2700	1650	1100	NS	NS	NS	2400	1600	1100	NS	NS	NS
165x65	40	4050	2700	1750	1300	NS	NS	3500	2700	1800	1350	NS	NS
	75	3700	2600	1750	1350	1050	NS	3200	2500	1750	1300	1050	NS
195x65	40	4750	3850	2500	1850	1450	NS	4100	3650	2550	1900	1500	NS
	75	4400	3550	2450	1850	1500	1250	3850	3350	2400	1850	1500	1250
230x65	40	5600	5000	3500	2600	2050	1700	4750	4400	3550	2650	2100	1700
	75	5200	4450	3350	2550	2050	1750	4500	4050	3250	2500	2050	1700
260x65	40	6350	5700	4500	3350	2650	2200	5300	4950	4400	3400	2700	2200
	75	5900	5100	4250	3250	2650	2200	5050	4600	4050	3150	2600	2200
295x65	40	7200	6550	5900	4300	3400	2850	6000	5600	5300	4400	3500	2850
	75	6700	5850	5250	4150	3350	2850	5750	5200	4800	4000	3300	2800
330x65	40	8100	7400	6850	5450	4300	3550	6650	6300	6000	5400	4400	3600
	75	7600	6650	5950	5150	4200	3550	6400	5850	5450	4950	4050	3450
360x65	40	8900	8150	7550	6550	5150	4250	7300	6900	6550	6250	5250	4350
	75	8350	7350	6600	6050	4950	4200	7000	6450	5950	5600	4800	4050
395x65	40	9850	9050	8400	7900	6250	5150	8000	7600	7250	6900	6200	5300
	75	9300	8200	7400	6800	5900	5000	7700	7100	6600	6200	5700	4850
425x65	40	10700	9900	9200	8650	7250	5950	8650	8200	7850	7500	7100	6100
	75	10100	8950	8100	7450	6800	5750	8350	7700	7200	6750	6400	5550
460x65	40	11700	10850	10150	9550	8600	7050	9400	8950	8600	8250	7900	7050
	75	11100	9900	8950	8250	7700	6700	9100	8450	7900	7400	7050	6450
495x65	40	12000	11900	11150	10500	9900	8200	10200	9750	9350	8950	8650	8050
	75	12000	10850	9900	9100	8450	7700	9850	9200	8600	8100	7700	7350
130x85	40	3500	2200	1450	1050	NS	NS	2900	2250	1450	1100	NS	NS
	75	3050	2100	1450	1100	NS	NS	2650	2050	1400	1050	NS	NS
165x85	40	4400	3600	2350	1750	1400	1150	3800	3450	2400	1750	1400	1150
	75	4050	3350	2300	1750	1400	1150	3600	3050	2250	1700	1400	1150
195x85	40	5150	4650	3300	2450	1950	1600	4400	4100	3350	2500	1950	1600
	75	4750	4100	3150	2400	1950	1650	4200	3750	3050	2350	1900	1600
230x85	40	6100	5500	4650	3400	2700	2250	5100	4800	4500	3500	2750	2250
	75	5650	4900	4350	3350	2700	2250	4900	4400	4100	3250	2650	2250
260x85	40	6850	6250	5750	4400	3450	2850	5750	5400	5100	4450	3550	2900
	75	6400	5600	5000	4200	3400	2900	5500	5000	4650	4050	3350	2800
295x85	40	7800	7150	6600	5700	4500	3700	6500	6100	5800	5550	4650	3800
	75	7350	6400	5800	5300	4350	3700	6250	5700	5300	4950	4250	3600
330x85	40	8800	8100	7500	7000	5700	4700	7250	6850	6550	6250	5700	4800
	75	8300	7300	6600	6050	5400	4550	7000	6400	5950	5600	5200	4450
360x85	40	9700	8900	8300	7800	6800	5600	7900	7500	7150	6850	6600	5750
	75	9150	8100	7300	6750	6250	5400	7650	7050	6550	6150	5850	5250
395x85	40	10700	9950	9300	8700	8250	6800	8700	8300	7950	7600	7300	6800
	75	10150	9050	8200	7550	7050	6450	8400	7800	7300	6850	6500	6200
425x85	40	11650	10850	10150	9550	9050	7900	9400	9000	8600	8250	7950	7700
	75	11050	9900	9000	8300	7750	7250	9100	8450	7950	7500	7100	6750
460x85	40	12000	11900	11200	10550	10000	9350	10250	9800	9450	9050	8750	8450
	75	12000	10950	9950	9200	8600	8050	9950	9300	8700	8200	7800	7450
495x85	40	12000	12000	12000	11600	11050	10550	11100	10700	10250	9900	9550	9250
	75	12000	12000	11000	10150	9500	8900	10800	10100	9500	9000	8550	8150
525x85	40	12000	12000	12000	12000	11950	11400	11900	11450	11000	10600	10250	9950
	75	12000	12000	11900	11000	10300	9700	11550	10850	10250	9700	9200	8800
560x85	40	12000	12000	12000	12000	12000	12000	12000	12000	11900	11500	11150	10800
	75	12000	12000	12000	12000	11300	10600	12000	11750	11100	10550	10000	9600
590x85	40	11400	12000	12000	12000	12000	12000	12000	12000	12000	12000	11900	11550
	75	12000	12000	12000	12000	12000	11450	12000	12000	11850	11250	10750	10250

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 GL 17 in this table are stocked in each state. Please check with your supplier before ordering

SMARTFRAME Design Compendium

Design Compendium Contents	Interactive	Printable	PC
Specifications software	✓	✓	✓
Technical Support	✓		✓
Design Guides (PDF)		✓	✓
Technical Illustrations		✓	✓
Fixing Details		✓	✓
Software Tutorial	✓		✓

Never before has so much user-friendly computer power you 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 Wood products themselves, combines to form the most sophisticated structural timber option ever available to the Australian market.

The Smart Frame Engineered Timber Solution represents an entirely new and revolutionary concept in the delivery of the 21st century technology and service to the building industry.

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